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CONTENTS

Editorial: Review of the Southern California Botanists 1996 symposium, "A new flora for Southern California." — *SCB Board of Directors* 1

Flora of the Santa Monica Mountains: synonymized checklist and index — *Carl Wishner* 3

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CROSSOSOMA

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EDITORIAL

REVIEW OF THE SOUTHERN CALIFORNIA BOTANISTS 1996 SYMPOSIUM, "A NEW FLORA FOR SOUTHERN CALIFORNIA"

Last October, the annual Southern California Botanists symposium addressed poorly documented elements of the Southern California flora, including certain taxa and geographic regions, and a panel of agency botanists described how their respective agencies could use a new flora or support its production. The symposium title, **"A New Flora for Southern California"** was chosen with the hope of sparking interest among botanists to contribute toward a better understanding of our region's plants and their distributions, with the goal of eventually publishing a new flora. During the symposium, and since then, we have learned that the title suggested to some that a new flora was in preparation. In this note, we hope to clarify the status of the new flora and perhaps to renew any interest aroused during the symposium.

First, let us clarify that the Flora of Southern California project is not formally underway, but that we expect to see it take shape in the near future. We hope to see this new book published, and we intend to take some steps in its support. The symposium title was intended, perhaps provocatively, to call attention to a need for a new, complete, accurate, and field-friendly regional flora. We particularly wish for a smaller book than is now available; with detailed and accurate keys, descriptions, and distributions; and with further details such as habitat and phenology. We hope to see the book "constructed" from the bottom upward. That is, we feel that it should be built primarily from field work and herbarium records; secondly, from vouchered floristic studies; and *lastly* from more general non-vouchered floras.

Southern California presently is served by two major floristic works (Hickman 1993; Munz 1974) and many local floras (e.g., Boyd et al. 1995). But in our view, none of these (either alone or in combination) offers botanists the comprehensive, accurate, and convenient flora needed for a region where (1) floristic inventories are routinely prepared and considered in land use decisions, (2) newly arriving and dispersing non-native species have been poorly documented, and (3) many large areas still have been poorly explored botanically.

We would like to see a new flora build on the existing knowledge, and improve its treatment of a few selected points, below:

Provide an exhaustive compilation of all taxa naturalized in the region. Any flora should fill this role, yet we are continually adding taxa simply by reviewing herbarium records. We have been disappointed that the Jepson Manual often does not include taxa that have been in the herbaria for years. In the past two years, several of us (e.g., Sanders 1996) have published records of taxa not previously reported in Southern California. Many more "noteworthy collections" are still in preparation. New taxa and significant range extensions continue to be discovered in the field and in the herbarium cabinets. No flora can ever be considered complete, but the volume of ongoing additions to published floras indicates that we are too far from that goal.

Describe geographic ranges accurately and completely. For many of us, the treatment of distributions in the Jepson Manual has been a sad disappointment. There is some disagreement about whether the approach based on biotic provinces was wise. The provinces are more meaningful to plant distributions than are political boundaries; yet botanists tend to be more familiar with county boundaries and have been frustrated by the strings of coded abbreviations. However, regardless of the merits of geographic provinces, many (some would say *most*) ranges described in the Jepson Manual are incomplete, unnecessarily vague, or just wrong. Repeatedly, we find ourselves turning to Munz's earlier floras for guidance. Yet these may be equally frustrating. For example, is a plant of the South Coast province likely to occur in the San Bernardino Valley? And does the description "cismontane Ventura County to Lower California" help resolve the question?

We hope to see these problems solved in a new flora, and Southern California Botanists will take the following steps in its support:

☐ We have formed a committee to develop a prospectus for a new flora. When complete, SCB will continue to support the committee in producing the flora.

☐ We offer the pages of *Crossosoma* for publication of Southern California floristic work, including treatments of local genera, distribution notes, and local floras or checklists.

☐ We will offer field trips to areas of particular interest, where floristic study still is needed. We will not be able to promise what to expect, but we hope that our members will be enthusiastic about participating in these kinds of trips.

☐ We will seek to make arrangements with local herbaria to hold workshops for those who may be interested in reviewing and documenting plants and their distributions from existing collections or from new ones.

☐ We offer our newsletter, *Leaflets*, for the dissemination of notes and reports on aspects of the project, including meetings, workshops, and volunteer opportunities.

We hope for support in a range of roles from both professional and amateur botanists. Much of the work to be done requires skills outside botany. For example, we will need support from members who can prepare illustrations and photographs, search for public domain illustrations and text, assemble data bases and work with existing text in a variety of computer formats, or work with publishers.

We hope that the 1996 symposium brought attention to the many gaps between published floras and the collective knowledge among botanists working in Southern California. We hope further that attendees were inspired to make field trips and plant collections in areas where the flora hasn't yet been well documented, to search herbarium collections for vouchers of poorly documented species, or to begin work on small (vouchered) floras and notes on plant geography. We hope that this note might remind those interested botanists and others of the need for such work. The new Flora of Southern California will be built from these small contributions.

— ***The SCB Board of Directors****
*[Reviewed and approved by the Board, 14 May 1997]

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FLORA OF THE SANTA MONICA MOUNTAINS: SYNONYMIZED CHECKLIST AND INDEX

CARL WISHNER
Envicom Corporation
28328 Agoura Road
Agoura Hills, California 91301

ABSTRACT: This synonymized checklist and index presents a compilation of the scientific names for 880 species reported in the Flora of the Santa Monica Mountains, California (Raven *et al.* 1986), cross-referenced with other major treatments including The Jepson manual: higher plants of California (Hickman [ed.] 1993); A flora of Southern California (Munz and Keck 1974); A synomymized checklist of the vascular flora of the United States, Canada, and Greenland (Kartesz 1994); and Flora of North America Vols. 2 and 3 (FNA Ed. Comm. 1993; 1997). It also includes common names appearing in these works, and page numbers for each taxonomic reference. Five additional species not previously reported for the Santa Monica Mountains are also included herein. A statistical summary of the flora is provided using the nomenclature in the local flora compared to that in The Jepson manual, whereby the latter treatment yields a net change of -5 families, +2 genera, -10 species, and -9 subspecies and/or varieties. Most of the major nomenclatural differences are discussed. Additional information and unresolved questions of nomenclature pertaining to plants of the Santa Monica Mountains are forwarded to the user of the checklist.

KEY WORDS: botany; California, flora, floristics, index, nomenclature, Santa Monica Mountains, synonymized checklist, taxonomy, vascular plants.

INTRODUCTION

The recently published The Jepson manual: higher plants of California (Hickman [ed.] 1993) has presented numerous nomenclatural changes to botanists in the state. Even for those who would unquestioningly accept all of these revisions, the necessarily condensed morphological, habitat and distribution descriptions in The Jepson manual are sometimes lacking in detail compared to some older treatments, whose continuing usefulness cannot be denied. Moreover, several references are often useful when making a determination of an unknown plant. This has resulted in the need for a single compilation of the names for the vascular flora of California, as used within several popular references, in order to facilitate rapid cross referencing of these names. The present checklist and index is a compilation of the names for the reported 880 species[1] of vascular plants that are included in the Flora of the Santa Monica Mountains, California (Raven *et al.* 1986), which is now out-of-print, and for which there are no plans for a reprinting. This checklist is not intended to provide the user with the 'correct' scientific name, or even the most universally 'accepted' scientific name for any given taxon in these mountains. Rather, it is intended to serve as a cumulative bibliographic checklist, cross-reference, and index for the names that have been applied within several major floristic treatments. The author apologizes beforehand for any errors or misinterpretations of nomenclature which may have been introduced and thereby could be perpetuated via the present checklist. It is sincerely hoped that the checklist will foster an increased botanical scrutiny in the region, and perhaps contribute toward an early update and revision of the local flora.

Also included in the checklist are two native and two alien species reported in the literature as additions to the flora since its publication in 1986. These are *Baccharis malibuensis* Beauchamp & Henrickson (1996), *Nolina cismontana* Dice (see Hess and Dice 1995), *Galenia pubescens* (Ecklon &

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[1] More than one subspecies or variety of a given species found in the Santa Monica Mountains was counted therein as only one species.

Zeyher) Druce var. *p.* (see Ross and Boyd 1996), and *Euphorbia terracina* L. (see Sanders 1997). One additional species, namely, *Carduus pycnocephalus* L. is also included, although it is unreported, because it is undeniably a widespread, noxious weed in these mountains. Beyond these five species, the checklist does not include any additional taxa for the range, although, the author is preparing a manuscript describing these additions, numbering more than twenty unreported species.

Conveniently, the above-mentioned Flora of the Santa Monica Mountains, California (Raven *et al.* 1986) serves as the basis for the 'encyclopedic' arrangement of taxa entered into the left column of the checklist. All corresponding common names given in this local flora were recorded in the second column, preceded by the letter "**r**", in bold typeface to indicate the source of that common name as Raven *et al.* The page number where each taxon is described in that reference was then recorded as the first entry in the third column (without a preceding letter). The scientific names from the local flora were then cross-referenced with A flora of Southern California (Munz and Keck 1974), and simultaneously with The Jepson manual: higher plants of California (Hickman [ed.] 1993), including corrections published in *The Jepson Globe* vol. 7 (1996), vol. 8 (1997), and vol. 9 no. 1 (1998). When scientific names in the latter treatments differed from those appearing in the local flora, these were indicated in square brackets following the initial entry. Common names appearing in the latter treatments were recorded as well, and the reference indicated. Similarly, A synomymized checklist of the vascular flora of the United States, Canada and Greenland (Kartesz 1994) was cross-referenced (no page numbers recorded). Also available for cross-referencing was Flora of North America, Vol. 2 (ferns and gymnosperms) and Vol. 3 (Magnoliophyta) (FNA Ed. Comm. 1993; 1997).

Scientific names appearing in the four additional references, where differing from the those found in the local flora were preceded by the bold typeface letters **j**, **m**, **k**, and **f** to denote their sources as Jepson, Munz, Kartesz, and FNA, respectively. Thus, single entries in the checklist with no other names following are in substantial agreement among all references (e.g., *Equisetum laevigatum* A. Braun). Instances where scientific names involve differing treatment as varieties versus subspecies, but the names are otherwise the same are indicated where only the words 'var.' or 'ssp.' were underlined. Where only the variety or subspecies names themselves differ, then only the name was underlined. Where both the words 'var.' or 'ssp.' and the name are underlined, then the taxon was not provided in the local flora, and it has been implied here on the basis of distribution given in another reference, recognizing the inherent pitfalls that this could create. The user should consider all such inference as suspect, and deserving of further scrutiny.

The sources of common names in the second column were specifically indicated by letter, and no common names were imported from other references. Page numbers where each taxon is described in each reference (except Kartesz; no descriptions) were recorded, preceded by corresponding (non-bold) letters j, m, and f.

During the course of the compilation, numerous discrepancies in the scientific names, common names, or authorities were noted, and these have been underlined in the checklist. Careful attention to underlined words and letters will point the user of the checklist to these discrepancies, but the underline itself is not part of the nomenclature. Spelling errors were corrected (and underlined) when these were clearly evident.

In order to eliminate ambiguity, the abbreviated authority names found in the indexed references were expanded to their full, un-abbreviated surnames, mostly using Munz and Keck (1959), and Mabberley (1997).[2] This resulted in longer, and occasionally unwieldy entries in the checklist, however, some users may find that the full authors' names are of interest in addition to the scientific names themselves. Therefore, the full surnames were retained herein, rather than reducing them back to standardized abbreviations using Brummitt and Powell (1992). This name-expansion exercise pointed-out additional authorship discrepancies, several of which remain unresolved in the present checklist. Finally, footnotes were used to provide additional details, and to forward other unresolved nomenclatural questions to the user.

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[2] To save space, a few, selected abbreviations are retained for authors including L., DC., and HBK. (for Linnaeus, DeCandolle, and Humboldt, Bonpland & Kunth, respectively).

RESULTS AND DISCUSSION

This methodology resulted in a checklist, cross-reference, and index of the scientific and common names appearing in five popular references. Some examples from the checklist should serve to acquaint the user with its conventions and features. The first entry in the checklist, taken from the local flora by Raven *et al*. (**r**) is the Division Lycopodophyta, a name generally treated (with slightly different spelling, Lycopodiophyta) within the broader group of ferns and allies (Pteridophyta) in Flora of North America vol. 2 (**f**) and in Kartesz (**k**). Munz and Keck (**m**) uses the Division Tracheophyta; Subdivision Lycopsida; Order Selaginellales as a coordinate classification. The Jepson manual (**j**) uses the differently-spelled Division Lycophyta; Order Selaginellales. The second column indicates that no common names are specifically given in any of the referenced sources for this particular Division. The page numbers where the Division can be found in each of the sources is given in the third column, starting with the local flora, and followed by the others (preceded by letter), except for Kartesz.

Continuing downward in the checklist, the family name Selaginellaceae is found in all sources on the pages indicated, and the common name "spike-moss family" is found in Flora of North America (**f**) and in The Jepson manual (**j**), but not found in the other references. Similarly, the genus *Selaginella* appears in all references, with the common name "spike-moss" in all sources except Munz and Keck (**m**), which uses the name "little club-moss." Our single species in the Santa Monica Mountains, *Selaginella bigelovii*, has two common names appearing in Flora of North America; none are given in any of the other references. The authority for the species is expanded to L. Underwood (spaces removed within checklist).

Moving further down in the checklist to the Division Arthrophyta, again note considerable variation among names that are found in the references at the level above the families. Both *Equisetum hyemale* var. *affine* and *E. telmateia* var. *braunii* as given by Raven *et al*. and by Munz and Keck are treated as subspecies in The Jepson manual and in Flora of North America, with attendant differences of authorship. Within Division Pterophyta in the strict sense, the family Adiantaceae is treated as Pteridaceae in the other references. Notice that *Cheilanthes newberryi* in the local flora and in Munz and Keck is treated as *Notholaena* in the more recent references. Similarly, varieties of *Pellaea andromedifolia* are not recognized in the more recent references. *Pityrogramma triangularis* in the local flora and in Munz and Keck (**m**) is treated in the genus *Pentagramma* in Flora of North America (**f**), The Jepson manual (**j**), and in Kartesz (**k**), being segregated from *Pityrogramma* on the basis of spore and petiole morphology, as indicated in the footnote.

Hopefully, these examples are sufficient to enable the user to interpret the information in the checklist. Doubtless, one will find numerous curious, interesting, or unfamiliar names throughout the checklist. For instance, Kartesz places *Eremocarpus setigerus* in the genus *Croton, Calyptridium monandrum* in *Cistanthe, Rhamnus californica* in *Frangula, Potentilla egedii* in *Argentina, Linaria texana* in *Nuttallanthus, Mimulus pilosus* in *Mimetanthe*, and *Petunia parviflora* in *Callibrachoa*, and splits our *Antirrhinum* into *Sairocarpus* and *Neogaerrhinum*.

It is of interest to examine how the differences in nomenclature between the Flora of the Santa Monica Mountains and The Jepson manual affect the statistical summary of the flora for the range. At the family level, the inclusion of Adiantaceae in Pteridaceae reduces the previously reported seven families of pteridophyes in the local flora to six using The Jepson manual. Note also the differences among family names including the latter's use of Dryopteridaceae and Thelypteridaceae to replace Aspidiaceae and Aspleniaceae, respectively. For the dicotyledons, there are few differences between the family treatments found in the local flora (Raven *et al*. 1986) and in The Jepson manual, except that the latter segregates *Ribes* from Saxifragaceae into its own family, Grossulariaceae, and *Orobanche* from Scrophulariaceae into Orobanchaceae, and segregates *Cuscuta* from Convolvulaceae into Cuscutaceae. Raven *et al.* in error report 83 families of dicotyledons; in fact, 84 families are included therein. There are 87 corresponding dicotyledon families using The Jepson manual. The count for monocotyledon families is reduced by six by the inclusion of Agavaceae, Alliaceae (Amaryllidaceae), Calochortaceae, Hyacinthaceae, and Melanthiaceae in Liliaceae (in the broad sense), and by inclusion of Ruppiaceae in Potamogetonaceae. Raven *et al.* (1986) in error report 16 families of monocotyledons; in fact, 20 are included therein. There are 14 corresponding monocot families using The Jepson manual. Note also the family name change from Najadaceae to Hydrocharitaceae. In total, the (actual) 114 vascular plant families reported in Raven *et al.* (1986) are treated as 109 families in The Jepson manual.

At the genus level, there is a net gain of 2 genera by using The Jepson manual compared to the local flora; up from 440 to 442 genera as follows:

Transfer *Chrysopsis* to *Heterotheca*	-	1
Segregate *Ericameria, Hazardia* and *Isocoma* from *Haplopappus* (ours)	+	2
Segregate *Microseris* into *Stebbinsoseris, Uropappus* and *Microseris*	+	2
Segregate *Euthamia* from *Solidago*	+	1
Segregate *Ancistrocarphus* from *Stylocline*	+	1
Change *Arthrocnemum subterminale* to *Salicornia subterminalis*	-	1
Segregate *Hoita* and *Rupertia* from *Psoralea*	+	1
Change *Boisduvalia glabella* to *Epilobium pygmaeum*	-	1
Change *Persicaria* spp. to *Polygonum* spp.	-	1
Change *Diplacus longiflorus* to *Mimulus aurantiacus*	-	1
Transfer *Orthocarpus* (ours) to *Castilleja*	-	1
Change *Agropyron parishii* var. *laeve* to *Elymus stebbinsii*	-	1
Segregate *Leymus* from *Elymus*	+	1
Segregate *Achnatherum* and *Nassella* from *Stipa* (ours)	+	1
NET	+	2

The addition of previously unreported species in the genera of *Carduus, Galenia,* and *Nolina* brings the count of genera to 445. Other noteworthy changes in genus names found in The Jepson manual that do not affect the genus count include:

Change *Pityrogramma triangularis* to *Pentagramma t.*
Change *Corethrogyne filaginifolia* to *Lessingia f.*
Change *Matricaria matricarioides* to *Chamomilla suaveolens*
Change *Mahonia pinnata* to *Berberis p.*
Change *Caulanthus lasiophyllus* to *Guillenia lasiophylla*
Change *Streptanthus heterophyllus* to *Caulanthus h.*
Change *Cleome isomeris* to *Isomeris arborea*
Change *Alchemilla arvensis* to *Aphanes occidentalis*
Change *Orthocarpus densiflorus* and *O. purpurascens* to *Castilleja densiflora* and *C. exserta*
Change *Habenaria unalascensis* to *Piperia u.*
Change *Oryzopsis miliacea* to *Piptatherum miliaceum*

The overall count of *full* species, reported as 880 in the local flora, appears to be diminished by eleven by using the changes in The Jepson manual as follows:

Reduce *Cirsium californicum* to a variety of *C. occidentale*
Reduce *Gnaphalium beneolens* and *G. microcephalum* to subspecies of *G. canescens*
Reduce *Amsinckia intermedia* to a variety of *A. menziesii*
Combine *Lupinus polycarpus* with *L. bicolor*

Reduce *Vicia dasycarpa* to *V. villosa* var. *varia*
Reduce *Rumex crassus* to a variety of *Rumex salicifolius*
Reduce *Verbena robusta* to a variety of *V. lasiostachys*
Combine *Bromus unioloides* and *B. willdenovii* under *B. catharticus*
Reduce *Bromus rubens* to *B. madritensis* ssp. *r.*
Reduce *Vulpia megalura* to a variety of *V. myuros*
Combine *Vulpia pacifica* and *V. reflexa* under *V. microstachys* var. *pauciflora*

This is countered by an increase of one species by:

Elevate *Lolium perenne* ssp. *multiflorum* to full species rank

This results in a net loss of 10 total species from 880 to 870. The addition of five previously unreported species brings the total to 875.

Below the level of species, the local flora did not enumerate the number of taxa overall. The user should note that all three former varieties of *Corethrogyne filaginifolia* that are reported have been reduced to synonymy with *Lessingia filaginifolia* var. *f.* in The Jepson manual. Similar cases where two subspecies or varieties of a single species reported in the local flora are reduced to synonymy with the nominate subspecies in The Jepson manual include *Pellaea andromedifolia, Erigeron foliosus, Xanthium strumarium, Lupinus bicolor, Epilobium canum, Orthocarpus purpurascens*, and *Eleocharis montevidensis*. This results in a net loss of nine taxa at the subspecies and variety level, without affecting the number of full species.

The perception among many that The Jepson manual tends to 'lump' taxa is borne out by the net loss of 19 taxa at the species level and below. On the other hand, considerable 'splitting' of other taxa in The Jepson manual has raised questions regarding the proper identity of subspecies and/or varieties of numerous species that are reported from the range. These are noted in the checklist. In some cases, additional subspecies or varieties of a given species may ultimately be found to be present in these mountains. Thus, it is conceivable that the overall effect of the net loss of nine taxa at the subspecies and variety level could be recovered by the re-evaluation of earlier collections, or by the discovery of new taxa at this level for the Santa Monica Mountains. Meanwhile, additional genera and species continue to be discovered.

CHECKLIST AND INDEX

scientific name(s)	common name(s)	reference pages
LYCOPODOPHYTA [j:LYCOPHYTA; Selaginellales; **fk**:PTERIDOPHYTA (part); LYCOPODIOPHYTA; **m**:TRACHEOPHYTA (part); Lycopsida; Selaginellales]		23;f38;j1319;m12
Selaginellaceae Willkomm	**fj**:spike-moss family	23;f38;j109;m12
Selaginella Palisot de Beauvois	**rfjm**:spike-moss; **m**:little club-moss	23;f39;j109;m14
Selaginella bigelovii L.Underwood	**f**:Bigelow's spike-moss, bushy spike-moss	23;f46;j109;m14

scientific name(s)	common name(s)	reference pages
ARTHROPHYTA [j:SPHENOPHYTA: Equisetales; **fk**:PTERIDOPHYTA (part); EQUISETOPHYTA; **m**:TRACHEOPHYTA (part); Sphenopsida; Equisetae]		24;f76;j94;m15
Equisetaceae Michaux *ex* DeCandolle	**fjm**:horsetail family	24;f76;j94;m15
Equisetum Linnaeus[3]	**rfjm**:horsetail, scouring rush; f:prêle	24;f76;j95;m15
E. hyemale L. var. *affine* (Engelmann) A.A.Eaton [**fj**:*E. h.* L. ssp. *a.* (Engelmann) Calder & RoyL.Taylor][4]	f:common scouring rush, prêle d'hiver	24;f82;j95;m15
E. × *ferrissii* Clute (*pro sp.*) [*E. hyemale* × *E. laevigatum*]	sterile hybrid	24;f83;j95;m15
E. laevigatum A.Braun	**rfj**:smooth scouring rush	24;f82;j95;m15
E. telmateia Ehrhart var. *braunii* (Milde) Milde [**fj**:*E. t.* Ehrhart ssp. *b.* (J.Milde) R.L.Hauke]	**rfjm**:giant horsetail	24;f80;j95;m16
PTEROPHYTA [**fk**:PTERIDOPHYTA *sensu stricto*[5]; POLYPODIOPHYTA; **m**:TRACHEOPHYTA (part); Pteropsida (part); Filicales and Salviniales]	**m**:ferns; **j**:ferns and allies	24;f11;j1319;m17
Adiantaceae Newman [**fjm**:Pteridaceae Reichenbach]	f:maidenhair fern family; j:brake family	25;f122;j101;m24
Adiantum Linnaeus	**rf**:maidenhair fern; **m**:maidenhair	25;f125;j101;m25
A. capillus-veneris L.	f:Venus's-hair fern; **rm**:Venus-hair fern; f:southern maidenhair; j:southern maiden-hair	25;f127;j102;m25
A. jordanii C.Mueller [f:*A. j.* Müller Halle; **m**:*A. j.* K.Müller]	r:California maidenhair fern; **fm**:California maidenhair; j:California maiden-hair	25;f127;j102;m25
Aspidotus (Nuttall *ex* Hooker) Copeland [f:*A.* (Nuttall *ex* Hooker & Baker) Copeland]	f:lace fern, aspidote	25;f170;j102;m26
A. californica Nuttall [**fk**:*A. c.* (Hooker) Nuttall *ex* Copeland; **j**:*A. c.* (Hooker) Copeland; **m**:*Cheilanthes c.* Mettenius]	**rfm**:California lace fern	25;f171;j102;m26
Cheilanthes Swartz	**rfm**:lip fern	26;f152;j104;m25
C. covillei Maxon	f: Coville's lip fern	26;f161;j104;m26
C. newberryi D.C.Eaton [**fjk**:*C. n.* (D.C.Eaton) Domin; **m**:*Notholaena n.* D.C.Eaton]	**rm**:cotton fern; f:Newberry's lip fern	26;f167;j105;m28

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[3] *Equisetum* subg. *Equisetum*, or horsetails includes *E. telmateia* and *E. arvense*. *Equisetum* subg. *Hippochaete*, or scouring rushes includes *E. laevigatum*, *E. hyemale* and *E.* × *ferrissii*.

[4] R.H. Taylor indicated in **j**.

[5] Pteridophyta *sensu lato* includes Arthrophyta and Lycopodophyta (**jk**).

scientific name(s)	common name(s)	reference pages
Adiantaceae (cont.)		
Notholaena R.Brown	**f**:cloak fern	26;f142;j105;m28
N. californica D.C.Eaton ssp. *leucophylla*[6] Windham	**r**:cloak fern; **j**:California cloak fern	26;f147;j105;m29
Pellaea Link	**rfjm**:cliff-brake	26;f175;j106;m29
P. andromedifolia[7] (Kaulfuss) Fée var. *a.* [**fjk**:*P. a.* (Kaulfuss) Fée]	**rm**:coffee fern	26;f179;j106;m31
P. andromedifolia (Kaulfuss) Fée var. *pubescens* Baker[8] [**fjk**:*P. a.* (Kaulfuss) Fée]	**rj**:coffee fern	26;f179;j106;m31
P. mucronata (D.C.Eaton) D.C.Eaton var. *m.* [**f**:*P. m.* (D.C.Eaton) D.C.Eaton *in* Emory ssp. *m.* **k**:*P. a.* (D.C.Eaton) D.C.Eaton ssp. *m.*]	**rm**:bird's foot fern; **j**:bird's-foot fern	26;f183;j106;m31
Pityrogramma[9] Link (part) [**fjk**:*Pentagramma* Yatskievych, Windham & E.Wollenweber]	**rfj**:goldback fern; **fj**:silverback fern	26;f135;j108;m31
P. triangularis (Kaulfuss) Maxon var. *t.* [**fjk**:*Pentagramma t.* (Kaulfuss) Yatskievych, Windham & E.Wollenweber ssp. *t.*][10]	**r**:goldback fern; **m**:goldenback fern	26;f151;j108;m32
Aspidiaceae[11] Burnett [**fjk**:Dryopteridaceae Herter]	**fj**:wood fern family	26;f246;j91;m17
Dryopteris Adanson	**r**:woodfern; **fjm**:wood fern, shield fern; **f**:dryoptère	26;f280;j92;m19
D. arguta (Kaulfuss) Watt [**fj**:*D. a.* (Kaulfuss) Maxon]	**r**:coastal woodfern; **f**:marginal wood fern, coastal wood fern	26;f284;j92;m19
Aspleniaceae Newman	**fjm**:spleenwort family	26;f228;j89;m22
Asplenium Linnaeus	**rfj**:spleenwort	26;f229;j89;m22
Asplenium vespertinum Maxon	**f**:western spleenwort	26;f240;j89;m22
Aspleniaceae (part) [**fjk**:see Thelypteridaceae Ching *ex* Pichi-Sermolli; **m**:see Aspidiaceae Newman]	**f**:marsh fern family; **j**:Thelypteris family	26;f206;j110;m17
Thelypteris Schmidel [**m**:*T.* Schott]	**f**:female fern	26;f207;j110;m21
Thelypteris puberula (Baker) C.V.Morton [**fjk**:*T. p.* (Baker) C.V.Morton var. *sonorensis* A.R.Smith]	**fj**:Sonoran maiden fern	26;f215;j110;m21
Azollaceae Wettstein [**m**:Salviniaceae Reichenbach (part)]	**r**:water fern family; **f**:Azolla family; **j**:mosquito fern family; **m**:Salvinia family	26;f33;j89;m34
Azolla Lamarck [**f**:*A.* Lamarck *in* Lamarck *et al.*]	**r**:mosquito fern, duck fern	26;f338;j89;m34

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[6] Based on distribution given in **f**, the nominate subspecies having yellow farina on leaf under surface could occur here. Plants collected by the author (1996) at Cornell-Agoura are *N. c.* ssp. *leucophylla* Windham, which has white farina on the leaf undersurface. The species is not reported in the SMM in **j**.

[7] Spelled using the dipthong 'æ' in **m**: ICBN Recommendation 60C makes change to 'i' in many, but not all cases (see *The Jepson Globe* vol. 7 no. 2 1996).

[8] Authority given in **jm** as D.C. Eaton, not Baker.

[9] According to **f**, *Pityrogramma* Link contains two species found in Florida, but no longer includes *P. triangularis*, which has been segregated on the basis of spore and petiole morphology as *Pentagramma*.

[10] Subspecies *viscosa* (Nuttall *ex* D.C. Eaton) Yatskievych, Windham & E.Wollenweber potentially occurs also in these mountains.

[11] The family name Aspidiaceae (**rm**:*Dryopteris* and **m**:*Thelypteris*) is considered 'illegitimate' in **f**.

scientific name(s)	common name(s)	reference pages
Azollaceae *Azolla* (cont.)		
A. filiculoides Lamarck [f:A. f. Lamarck *in* Lamarck *et al.*]	m:duckweed fern	26;f341;j90;m35
Blechnaceae C.Presl	f:chain fern family; j:deer fern family	27;f223;j90;m22
Woodwardia Smith	rfjm:chain fern	27;f226;j90;m23
W. fimbriata Smith [fm:*W. f.* Smith *in* Rees]	fj:giant chain fern	27;f227;j90;m23
Dennstaedtiaceae Ching[12]	j:bracken family	27;f198;j90;m--
Pteridium Scopoli [fk:*P.* Gleditsch *ex* Scopoli]	rf:bracken fern; jm:bracken, brake	27;f201;j90;m32
P. aquilinum (L.) Kuhn var. *pubescens* L.Underwood [f:*P. a.* (L.) Kuhn *in* Decken var. *p.* L.Underwood]	rf:western bracken	27;f203;j91;m32
Polypodiaceae Berchtold & J.Presl	fj:polypody family	27;f312;j100;m23
Polypodium Linnaeus	rfjm:polypody	27;f315;j100;m23
P. californicum Kaulfuss	fj:California polypody	27;f319;j100;m23
CONIFEROPHYTA [m:TRACHEOPHYTA (part); Pteropsida (part); Coniferae; Coniferales]	m:cone-bearing plants	27;f352;j1319;m35
Cupressaceae Bartlett[13]	f:redwood family fjm:cypress family	27;f399;j111;m35
Juniperus Linnaeus	rfjm:juniper; f:cedar, redcedar, cedro, sabino	27;f412;j111;m36
Juniperus californica Carrière	fjm:California juniper; f: huata, cedro	27;f419;j111;m37
ANTHOPHYTA [m:ANGIOSPERMAE]	mj:flowering plants	28;j1319;m45
DICOTYLEDONAE [mj:DICOTYLEDONES]	j:dicots	28;j1319;m45
Aceraceae Jussieu	jm:maple family	38;j125;m54
Acer Linnaeus	rj:maple	38;j125;m54
A. macrophyllum Pursh	r:bigleaf maple; jm:big-leaf maple; rm:canyon maple	38;j126;m54
A. negundo L. ssp. *californicum* (Torrey & A.Gray) Wesmael [jk:*A. n.* var. *c.* (Torrey & A.Gray) Sargent]	r:box-elder; jm:box elder	38;j126;m54
Aizoaceae Martinov	r:carpet weed family; m:carpet-weed family; j:fig-marigold family	38;j126;m55
Aptenia N.E.Brown		38;j128;m55
A. cordifolia (L.f.) N.E.Brown	j:baby sun rose	38;j128;m55
Carpobrotus N.E.Brown	j:fig-marigold	38;j128;m55
C. aequilaterus (Haworth) N.E.Brown [j:*C. chilensis* (Molina) N.E.Brown]	rm:sea-fig; j:sea fig	38;j128;m56
C. edulis (L.) N.E.Brown [mk:*C. e.* (L.) L.Bolus]	r:Hottentot-fig	38;j128;m56

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[12] Mabberley (1997) gives the author as Lotsy.

[13] Mabberley (1997) gives the author as A. Gray.

scientific name(s)	common name(s)	reference pages
Aizoaceae (cont.)		
Galenia Linnaeus		--;j--;m--
G. pubescens (Ecklon & Zeyher) Druce var. *p.*[14]		--;j--;m--
Malephora N.E.Brown		38;j129;m--
M. crocea (Jacquin) Schwantes		38;j129;m--
Mesembryanthemum Linnaeus [**m**:*Gasoul* Adanson]	j:iceplant	39;j129;m56
M. crystallinum L. [**m**:*Gasoul c.* (L.) Rothmaler]	j:crystalline iceplant; m:ice-plant	39;j129;m56
M. nodiflorum L. [**m**:*Gasoul n.* (L.) Rothmaler]	j:slender-leaved iceplant	39;j129;m56
Tetragonia Linnaeus	m:sea-spinach	39;j130;m58
T. tetragonioides (Pallas) Kuntze	r:New Zealand-spinach; j:New Zealand spinach; m:New-Zealand-spinach	39;j130;m58
Amaranthaceae Jussieu	j:Amaranth family	39;j130;m60
Amaranthus Linnaeus	j:pigweed, jm:amaranth	39;j131;m60
A. albus L.	rjm:tumbleweed	39;j132;m61
A. blitoides S.Watson[15]		39;j132;m61
A. californicus (Moquin-Tandon) S.Watson		39;j132;m61
A. deflexus L.		39;j132;m62
A. retroflexus L.		39;j133;m63
Anacardiaceae Lindley	rjm:sumac family; j:cashew family	39;j134;m64
Malosma Nuttall [**k**:*M.* Nuttall *ex* Abrams; **m**:*Rhus* Linnaeus]	m:sumac	40;j135;m64
M. laurina (Nuttall *ex* Torrey & A.Gray) Nuttall *ex* Abrams [**k**:*M. l.* (Nuttall) Nuttall *ex* Abrams; **m**:*Rhus l.* Nuttall *in* Torrey & A.Gray]	rjm:laurel sumac	40;j135;m66
Rhus Linnaeus	rm:sumac	40;j135;m64
R. integrifolia (Nuttall) Bentham & Hooker f. *ex* Brewer & S.Watson [**m**:*R. i.* (Nuttall) Bentham & Hooker; **j**:*R. i.* (Nuttall) Brewer & S.Watson]	rjm:lemonadeberry	40;j135;m64
R. ovata S.Watson	rjm:sugar bush	40;j135;m66
R. trilobata Nuttall var. *pilosissima* Engelmann [**m**:*R. t.* Nuttall *ex* Torrey & A.Gray var. *p.* Engelmann *in* DC.]	rm:squaw bush; j:skunkbrush	40;j135;m66
Schinus Linnaeus	rm:pepper-tree; j:pepper tree	40;j135;m66
S. molle L.	r:Peruvian-pepper; j:Peruvian pepper tree	40;j136;m66
Toxicodendron P.Miller [**m**:*T.* Tournefort]	j:poison oak, poison ivy	40;j136;m67
T. diversilobum (Torrey & A.Gray) E.Greene	rm:poison-oak; j:western poison oak	40;j136;m67
Apiaceae Lindley	rjm:carrot family	40;j136;m67
Apiastrum Nuttall [**k**:*A.* Nuttall *ex* Torrey & A.Gray; **m**:*A.* Nuttall *in* Torrey & A.Gray]		41;j141;m71
A. angustifolium Nuttall	rm:wild-celery	41;j141;m71

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[14] New addition to the SMM (Ross and Boyd 1996).

[15] Indicated as an alien species in **r**, native in **j**.

scientific name(s)	common name(s)	reference pages
Apiaceae (cont.)		
Apium Linnaeus		41;j141;m71
A. graveolens L.	**rjm**:celery	41;j141;m71
Berula G.Hoffmann [**k**:*B.* Besser *ex* W.D.J.Koch; **m**:*B.* G.Hoffmann *in* Besser]	**j**:cutleaf water-parsnip **m**:water-parsnip	42;j141;m71
B. erecta (Hudson) Coville		42;j141;m71
Bowlesia RuízLópez & Pavón[16]		42;j141;m72
B. incana RuízLópez & Pavón		42;j142;m72
Ciclospermum Lagasca		42;j142;m--
C. leptophyllum (Persoon) Sprague [**k**:*C. l.* (Persoon) Sprague *ex* Britton & Wilson; **j**:*C. l.* (Persoon) Britton & Wilson]		42;j142;m--
Conium Linnaeus	**j**:poison hemlock; **m**:poison-hemlock	42;j144;m73
C. maculatum L.	**r**:poison-hemlock	42;j144;m73
Daucus Linnaeus		42;j146;m75
D. pusillus Michaux	**rm**:rattlesnake weed	42;j146;m75
Foeniculum Adanson [**k**:*F.* P.Miller]		42;j148;m76
F. vulgare L. [**jm**:*F. v.* P.Miller]	**rj**:fennel **m**:sweet fennel	42;j148;m76
Hydrocotyle Linnaeus	**m**:marsh pennywort	42;j148;m76
H. moschata Forster f. [**k**:*H. m.* G.Forster][17]		42;j148;m--
H. umbellata L.		42;j150;m77
Lomatium Rafinesque		42;j150;m77
L. dasycarpum (Torrey & A.Gray) J.Coulter & Rose ssp. *d.*[18]		42;j153;m78
L. lucidum (Nuttall) Jepson [**k**:*L. l.* (Nuttall *ex* Torrey & A.Gray) Jepson; **j**:*L. l.* (Torrey & A.Gray) Jepson]		43;j154;m79
L. utriculatum (Nuttall) Coulter & Rose [**k**:*L. u.* (Nuttall *ex* Torrey & A.Gray) Coulter & Rose; **j**:*L. u.* (Torrey & A.Gray) Coulter & Rose]		43;j154;m80
Oenanthe Linnaeus	**r**:dropwort	43;j157;m80
O. sarmentosa J.S.Presl [**k**:*O. s.* K.Presl *ex* DC.		43;j157;m80
Osmorhiza Rafinesque	**rm**:sweet-cicely	43;j158;m82
O. brachypoda Torrey		43;j158;m82
Sanicula Linnaeus	**rm**:snakeroot, sanicle	43;j162;m84
S. arguta E.Greene *ex* Coulter & Rose [**j**:*S. a.* Coulter & Rose]		43;j163;m84
S. bipinnata Hooker & Arnott	**rjm**:poison sanicle	43;j163;m85
S. crassicaulis Poeppig *ex* DC. [j:*S. c.* DC.]		43;j163;m85
S. tuberosa Torrey		43;j164;m85
Scandix Linnaeus		43;j164;m85
S. pecten-veneris L.	**rm**:shepherd's needle **j**:Venus' needle	43;j164;m85
Tauschia Schlechtendal		43;j165;m86
T. arguta (Torrey & A.Gray) J.F.Macbride		44;j165;m86
T. hartwegii (A.Gray) J.F.Macbride		44;j165;m86

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[16] The name López is omitted in **r**, **k** and **m**. Although *The Jepson Globe* vol. 7 no. 3 indicates a correction to Ruíz López, as included in this checklist, this may still be in error, as Mabberley (1997) gives the name as López Ruíz.

[17] Forster f. and G.Forster are the same person: Forster, Johann Georg Adam (George Forster); son of J.R. Forster.

[18] The nominate subspecies is presumed here; it is unspecified in **r**

scientific name(s)	common name(s)	reference pages
Apiaceae (cont.)		
Torilis Adanson	**rm**:hedge-parsley	44;j166;m87
T. nodosa (L.) Gaertner		44;j166;m87
Yabea Kozo-Polianski[19] [**m**:*Caucalis* Linnaeus]		44;j166;m72
Y. microcarpa (Hooker & Arnott) Kozo-Polianski [**m**:*Caucalis m.* Hooker & Arnott]		44;j166;m72
Apocynaceae Jussieu	**rjm**:dogbane family	44;j166;m87
Apocynum Linnaeus	**rjm**:dogbane; **jm**:Indian hemp	44;j168;m88
A. cannabinum L. var. *glaberrimum* A.DC. [**kj**:*A. c.* L.]	**j**:Indian hemp	44;j168;m88
Vinca Linnaeus	**rm**:periwinkle	44;j169;m90
V. major L.	**j**:greater periwinkle	44;j169;m90
Asclepiadaceae Medikus *ex* Borkhausen	**rjm**:milkweed family	44;j170;m91
Asclepias Linnaeus	**rm**:milkweed	44;j171;m91
A. californica E.Greene [**k**:*A. c.* E.Greene ssp. *c.*]	**j**:California or round-hooded milkweed	44;j172;m92
A. eriocarpa Bentham	**j**:kotolo, Indian milkweed	44;j172;m92
A. fascicularis Decaisne in A.DC. [**kj**:*A. f.* Decaisne]	**j**:narrow-leaf milkweed	44;j172;m92
Asteraceae Martinov	**rjm**:sunflower family	45;j174;m95
Achillea L.	**rjm**:yarrow; **j**:milfoil	50;j189;m106
A. millefolium L. var. *californica* (Pollard) Jepson [**j**:*A. m.* L.]		50;j189;m106
Achyrachaena Schauer	**j**:blow-wives	50;j189;m107
A. mollis Schauer	**rm**:blow-wives	50;j189;m107
Acourtia D.Don [**m**:*Perezia* Lagasca]		50;j189;m214
A. microcephala DC. [**m**:*Perezia m.* (DC.) A.Gray]		50;j189;m214
Acroptilon Cassini	**j**:Russian knapweed	51;j189;m--
A. repens (L.) DC.	**rj**:Russian knapweed	51;j;189;m--
Ageratina Spach		51;j190;m107
A. adenophora (Sprengel) R.King & H.E.Robinson		51;j190;m107
Agoseris Rafinesque	**r**:mountain-dandelion; **m**:mountaindandelion	51;j190;m108
A. grandiflora (Nuttall) E.Greene		51;j192;m108
Amblyopappus Hooker & Arnott		51;j193;m109
A. pusillus Hooker & Arnott		51;j193;m109
Ambrosia Linnaeus	**rj**:ragweed; **j**:bur-sage	51;j193;m109
A. acanthicarpa Hooker	**r**:sand-bur; **j**:annual bur-sage	51;j193;m109
A. chamissonis (Lessing) E.Greene [**m**:*A. c.* Lessing]	**j**:beach-bur	51;j193;m110
A. confertiflora DC.		51;j194;m110
A. psilostachya DC. [**m**:*A. p.* DC. var. *californica* (Rydberg) Blake]	**j**:western ragweed	51;j194;m112
Anthemis Linnaeus	**j**:dog-fennel, chamomile	52;j198;m114
A. cotula L.	**rjm**:mayweed; **j**:stinkweed, dog-fennel	52;j198;m114
Artemisia Linnaeus	**rjm**:sagebrush; **rm**:wormwood	52;j;202;m116
A. biennis Willdenow [**k**:*A. b.* Willdenow var. *b.*?]		52;j203;m117

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[19] Kozo-Poljanski, Boris Mikhailovic also abbreviated Koso-Polj. or Kozo-Polj., or K.-Pol.

scientific name(s)	common name(s)	reference pages
Asteraceae *Artemisia* (cont.)		
A. californica Lessing	rj:California sagebrush; m:coastal sagebrush	52;j203;m117
A. douglasiana Besser [**m**:*A. d.* Besser *in* Hooker]	j:mugwort	52;j204;m117
A. dracunculus L. [**k**:*A. d.* L. ssp. *d.*?]	j:tarragon	52;j204;m117
Aster Linnaeus	rjm:aster	52;j205;m119
A. subulatus Michaux var. *ligulatus* Shinners [**m**:*A. exilis* Elliot]		52;j209;m122
Baccharis Linnaeus		52;j209;m123
B. douglasii DC.	j:marsh baccharis	52;j209;m124
B. malibuensis Beauchamp & Henrickson[20]		--;j--;m--
B. pilularis DC. ssp. *consanguinea* (DC.) C.B.Wolf [**jk**:*B. p.* DC.]	rj:coyote brush; j:chaparral broom	52;j210;m125
B. plummerae A.Gray ssp. *p*.	j:Plummer's baccharis	52;j210;m125
B. salicifolia (RuízLópez & Pavón) Persoon [**m**:*B. glutinosa* Persoon]	rjm:mule fat; j:seep-willow, water-wally	53;j210;m124
Bidens Linnaeus	rm:bur-marigold; j:sticktight, Spanish-needles, beggar's-ticks	53;j;213;m128
B. frondosa L.	rm:stick-tight; j:sticktight	53;214;m128
B. laevis (L.) Britton, Sterns, & Poggenburg	jm:bur-marigold	53;j214;m128
B. pilosa L. [**j**:*B. p.* L. var. *p.*]	rm:beggar-ticks; j:common beggar-ticks, Spanish-needles	53;j214;m128
Brickellia Elliott	j:Brickellbush	53;j215;m128
B. californica (Torrey & A.Gray) A.Gray [**k**:*B. c.* (Torrey & A.Gray) A.Gray var. *c.*]		53;j216;m129
B. nevinii A.Gray	j:Nevin's Brickellbush	53;j216;m131
Carduus Linnaeus[21]	jm:plumeless thistle	--;j220;m133
C. pycnocephalus L.	jm:Italian thistle	--;j220;m133
Centaurea Linnaeus	rj:star-thistle; m:star thistle; j:knapweed	53;j222;m134
C. melitensis L.	r:yellow starthistle[22]; rjm:tocalote	53;j222;m135
C. solstitialis L.	r:Barneby's-thistle; m:Barnaby's thistle; j:yellow star-thistle	53;j222;m135
Chaenactis DC.	j:pincushion	53;j223;m135
C. artemisiaefolia (Harvey & A.Gray) A.Gray [**j**:*C. artemisiifolia* (A.Gray) A.Gray; **k**:*C. artemisiifolia* (Harvey & A.Gray *ex* A.Gray) A.Gray]		53;j224;m136
C. glabriuscula DC. var. *g.*	j:yellow pincushion	54;j225;m137

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[20] Newly-described species endemic to the SMM, commonly known as "Malibu Baccharis." See Beauchamp, M. and J. Henrickson *Aliso* 14(3):197-203, 1996.

[21] *Carduus pycnocephalus* was omitted from **r**, although it is a prevalent weed in these mountains.

[22] This common name is best applied exclusively to *C. solstitialis*.

scientific name(s)	common name(s)	reference pages
Asteraceae (cont.)		
Chrysanthemum Linnaeus		54;j228;m140
C. coronarium L.	rm:garland chrysanthemum; j:garland, crown daisy	54;j228;m140
Chrysopsis (Nuttall) Elliott [j:*Heterotheca* Cassini (part)]	rm:golden-aster; j:goldenaster	54;j286;m140
C. villosa (Pursh) Nuttall var. *fastigiata* (E.Greene) H.M.Hall [j:*Heterotheca sessiliflora* (Nuttall) Shinners ssp. *f.* (E.Greene) Semple; k:*H. f.* (E.Greene) Harms]		54;j287;m141
C. villosa (Pursh) Nuttall var. *sessiliflora* (Nuttall) A.Gray [j:*Heterotheca* s. (Nuttall) Shinners ssp. s.; k:*H.* s. (Nuttall) Shinners]		54;j287;m141
Chrysothamnus Nuttall	rm:rabbit-brush; j:rabbitbrush	54;j229;m141
C. nauseosus (Pallas) Britton ssp. *mohavensis* (E.Greene) H.M.Hall & F.E.Clements [k:*C. n.* (Pallas *ex Pursh*) Britton ssp. *m.* (E.Greene) H.M.Hall & F.E.Clements]	j:rubber rabbitbrush	54;j230;m144
Cichorium Linnaeus	jm:chicory	54;j232;m145
C. intybus L.	r:chicory	54;j232;m145
Cirsium Adanson *emend.* DC. [k: C. P.Miller; m:C. Linnaeus]	rjm:thistle	54;j232;m145
C. californicum A.Gray [j:*C. occidentale* (Nuttall) Jepson var. *c.* Keil & C.Turner; k:*C. c.* A.Gray var. *c.*][23]		54;j238;m147
C. occidentale (Nuttall) Jepson [k:*C. o.* (Nuttall) Jepson var. *o.*]		54;j238;m147
C. vulgare (Savi) Tenore	rjm:bull thistle	54;j239;m148
Conyza Lessing [m:C. Linnaeus, *emend.* Lessing]		55;j239;m149
C. bonariensis (L.) Cronquist [k:*C. b.* (L.) Cronquist var. *b.*]		55;j240;m149
C. canadensis (L.) Cronquist [k:*C. c.* (L.) Cronquist var. *c.*][24]	rjmhorseweed	55;j240;m149
Coreopsis Linnaeus	jm:tickseed; m:coreopsis	55;j240;m149
C. bigelovii (A.Gray) H.M.Hall		55;j241;m150
C. calliopsidea (DC.) A.Gray		55;j241;m150
C. gigantea (Kellogg) H.M.Hall	r:sea-dahlia; j:giant coreopsis	55;j241;m150
Corethrogyne DC. [j:*Lessingia* Chamisso]		55;j304;m151
C. filaginifolia (Hooker & Arnott) Nuttall var. *latifolia* H.M.Hall [j:*Lessingia f.* (Hooker & Arnott) M.A.Lane var. *f.*]	j:California-aster	55;j305;m152
C. filaginifolia (Hooker & Arnott) Nuttall var. *peirsonii* Canby [j:*Lessingia f.* (Hooker & Arnott) M.A.Lane var. *f.*]	j:California-aster	55;j305;m152

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[23] The combination *Cirsium occidentale* var. *californicum* found in rj does not appear in k.

[24] Indicated alien species in r, native in j.

scientific name(s)	common name(s)	reference pages
Asteraceae *Corethrogyne* (cont.)		
C. filaginifolia (Hooker & Arnott) Nuttall var. *virgata* (Bentham) A.Gray [**j**:*Lessingia f.* (Hooker & Arnott) M.A.Lane var. *f.*]	j:California-aster	55;j305;m152
Cotula Linnaeus		56;j242;m152
C. australis (Sieber ex Sprengel) Hooker f. [**j**:C. a. (Sieber) Hooker f.; **m**:*C. a.* (Sieber) Hooker f.]		56;j242;m153
C. coronopifolia L.	r:brassbuttons; **jm**:brass-buttons	56;j242;m153
Cynara Linnaeus		56;j245;m154
C. cardunculus L.	**rjm**:cardoon; j:artichoke thistle	56;j245;m154
Dimorphotheca Vaillant [?**k**:*Osteospermum* Linnaeus]	**rjm**:Cape-marigold; j:African daisy	56;j246;m156
D. sinuata DC. [?**k**:*Osteospermum sinuatum* (DC.) Norlindh]		56;j246;m156
Encelia Adanson		56;j248;m157
E. californica Nuttall		56;j249;m158
Erigeron Linnaeus	**rm**:fleabane; j:fleabane daisy	56;j253;m159
E. foliosus Nuttall var. *f.*		56;j258;m161
E. foliosus Nuttall var. *stenophyllus* (Nuttall) A.Gray [**jk**:*E. f.* Nuttall var. *f.*]		56;j258;m161
Eriophyllum Lagasca	j:woolly sunflower	56;j261;m163
E. confertiflorum (DC.) A.Gray [**jm**:*E. c.* (DC.) A.Gray var. *c.*]	jmgolden-yarrow	56;j264;m163
Filago Linnaeus	j:herba impia	56;j266;m165
F. californica Nuttall		56;j266;m166
Galinsoga RuízLópez & Pavón		57;j269;m167
G. parviflora Cavanilles var. *p.*		57;j269;m167
Gnaphalium Linnaeus	**rjm**:cudweed, everlasting	57;j270;m169
G. beneolens A.Davidson [**j**:*G. canescens* DC. ssp. *b.* (A.Davidson) Stebbins & Keil; **k**:*G. microcephalum* Nuttall]		57;j271;m170
G. bicolor Bioletti		57;j271;m170
G. californicum DC.		57;j271;m170
G. chilense Sprengel [**jk**:*G. stramineum* Kunth]		57;j271;m170
G. leucocephalum A.Gray		57;j271;m171
G. luteo-album L. [**k**:G. *luteoalbum* L.]		57;j271;m171
G. microcephalum Nuttall [**j**:*G. canescens* DC. ssp. *m.* (Nuttall) Stebbins & Keil]		57;j271;m171
G. palustre Nuttall		57;j271;m171
G. ramosissimum Nuttall		58;j271;m171
Grindelia Willdenow	r:gumplant; j:gumplant; m:gum-plant	58;j271;m172
G. robusta Nuttall var. *r.* [**jk**:*G. camporum* E.Greene var. *c.*][25]		58;j272;m173

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[25] *Grindelia robusta* Nuttall *pro parte* is a synonym of *G. camporum* E.Greene var. *c.*

scientific name(s)	common name(s)	reference pages
Asteraceae (cont.)		
Gutierrezia Lagasca	**rjm**:matchweed; **j**:snakeweed	58;j274;m173
G. californica (DC.) Torrey & A.Gray [**m**:*G. bracteata* Abrams	**j**:California matchweed	58;j274;m174
Haplopappus Cassini[26]		58;j--;m174
H. arborescens (A.Gray) H.M.Hall ssp. *parishii* (E.Greene) Moran [**j**:*Ericameria a.* (A.Gray) E.Greene; **m**:*H. p.* (E.Greene) Blake; **k**:*E. p.* (E.Greene) H.M.Hall]	**j**:golden-fleece; **m**:goldenfleece	58;j252;m179
H. ericoides (Lessing) Hooker & Arnott ssp. *blakei* C.B.Wolf [**jk**:*Ericameria ericoides* (Lessing) Jepson]		58;j252;m177
H. linearifolius DC. [**j**:*Ericameria linearifolia* (DC.) Urbatsch & Wussow]	**j**:interior goldenbush	58;j253;m178
H. palmeri A.Gray ssp. *pachylepis* H.M.Hall [**j**:*Ericameria p.* (A.Gray) H.M.Hall var. *pachylepis*(A.Gray) G.Nesom; **k**:*E. p.* (A.Gray) H.M.Hall var. *pachylepis*(H.M.Hall) G.Nesom]		58;j253;m178
H. squarrosus Hooker & Arnott ssp. *grindelioides* (DC.) Keck [**jk**:*Hazardia squarrosa* (Hooker & Arnott) E.Greene var. *g.* (DC.) W.D.Clark]	**j**:saw-toothed goldenbush	58;j275;m179
H. venetus (HBK.) Blake ssp. *sedoides* (E.Greene) Munz [**jk**:*Isocoma menziesii* (Hooker & Arnott) G.Nesom var. *s.* (E.Greene) G.Nesom]		59;j295;m181
H. venetus (HBK.) Blake ssp.[27] *vernonioides* (Nuttall) H.M.Hall [**j**:*Isocoma menziesii* (Hooker & Arnott) G.Nesom var. *vernonioides* (E.Greene) G.Nesom; **k**:*I. m.* (Hooker & Arnott) G.Nesom var. *vernonioides* (Nuttall) G.Nesom]		59;j295;m181
Hedypnois Schreber [**k**:*H.* P.Miller]		59;j276;m182
H. cretica (L.) Willdenow [**jk**:*H. c.* (L.) Dumont de Courset]	**j**:Crete weed[28]	59;j276;m182
Helenium Linnaeus	**rjm**:sneezeweed	59;j276;m182
H. puberulum DC.	**r**:rosilla	59;j277;m182
Helianthus Linnaeus	**rjm**:sunflower	59;j277;m182
H. annuus L. [**m**:*H. a.* L. ssp. *lenticularis* (Douglas) Cockerell	**m**:common sunflower	59;j278;m183
H. gracilentus A.Gray		59;j278;m183
Hemizonia DC.	**rjm**:tarweed; **j**:tarplant	59;j280;m184
H. fasciculata (DC.) Torrey & A.Gray[29]		59;j282;m186
H. minthornii Jepson	**j**:Santa Susana tarplant	59;j283;m186
H. pungens (Hooker & Arnott) Torrey & A.Gray[30]	**r**:spikeweed; **j**:common spikeweed	59;j283;m187

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[26] *Haplopappus* in **k** is segregated into 13 genera for the U.S., seven for California (j), and three for these mountains, namely, *Ericameria* Nuttall, *Hazardia* E.Greene, and *Isocoma* Nuttall.

[27] Treated as a variety in **m**.

[28] Common name added in *The Jepson Globe* vol. 7 no. 1 1996.

[29] *H. ramosissima* Bentham, synonymous with *H. fasciculata* (DC.) Torrey & A.Gray is included in **m**.

[30] Whether ours is ssp. *laevis* Keck 'smooth tarplant', or ssp. *pungens*, or both, is not specified in **r**. Is the species introduced in SMM?

scientific name(s)	common name(s)	reference pages
Asteraceae (cont.)		
Heterotheca Cassini[31]	**rjm**:telegraph weed	59;j286;m187
H. grandiflora Nuttall	j:telegraph weed	59;j286;m188
Hieracium Linnaeus	**rjm**:hawkweed	60;j287;m188
H. argutum Nuttall ssp. *a.* [**j**:*H. a.* Nuttall]		60;j288;m188
Hypochoeris Linnaeus [**jk**:*Hypochaeris* L.]	**rj**:cat's-ear	60;j294;m194
H. glabra L.	j:smooth cat's-ear	60;j294;m195
H. radicata L.	j:rough cat's-ear	60;j294;m195
Iva Linnaeus	j:wormwood	60;j295;m195
I. axillaris Pursh [**jm**:*I. a.* Pursh ssp. *robustior* (Hooker) Bassett]	**rjm**poverty weed	60;j295;m195
Jaumea Persoon		60;j296;m195
J. carnosa (Lessing) A.Gray		60;j296;m196
Lactuca Linnaeus	**jm**:lettuce	60;j296;m196
L. serriola L.	**rj**:prickly lettuce; **m**:wild lettuce	60;j296;m196
Lagophylla Nuttall		60;j298;m196
L. ramosissima Nuttall [**jk**:*L. r.* Nuttall ssp. *r.*]		60;j298;m196
Lasthenia Cassini	**rjm**:goldfield	60;j298;m196
L. californica DC. *ex* Lindley [**j**:*L. c.* Lindley; **m**:*L. chrysostoma* (Fischer & C.A.Meyer) E.Greene]		60;j299;m197
L. coronaria (Nuttall) Ornduff		60;j299;m197
Layia Hooker & Arnott		61;j300;m199
L. platyglossa (Fischer & C.A.Meyer) A.Gray [**mk**:*L. p.* (Fischer & C.A.Meyer) A.Gray ssp. *p.*]	**rm**:tidy tips; **j**:tidy-tips	61;j303;m199
Lepidospartum A.Gray [**k**:*L.* (A.Gray) A.Gray]	j:scale-broom	61;j304;m200
L. squamatum (A.Gray) A.Gray	**m**:scale-broom	61;j304;m200
Madia Molina	**rjm**:tarweed	61;j310;m205
M. elegans D.Don ex Lindley [**j**:*M. e.* Lindley; **m**:*M. e.* D.Don][32]	j:common madia	61;j312;m205
M. exigua (Smith) A.Gray	j:threadstem madia	61;j312;m205
M. gracilis (Smith) Keck [**k**:*M. g.* (Smith) Keck & J.Clausen *ex* Applegate]	**rm**:gumweed; **j**:slender tarweed	61;j312;m206
Malacothrix DC.		61;j314;m206
M. clevelandii A.Gray		61;j314;m206
M. saxatilis (Nuttall) Torrey & A.Gray var. *tenuifolia* (Nuttall) A.Gray		61;j315;m208
Matricaria DC. [**k**:*M.* Linnaeus; **j**:*Chamomilla* A.Gray]		61;j227;m210
M. matricarioides auct. non (Lessing) Porter [**k**:*M. discoidea* DC.; **j**:*Chamomilla suaveolens* (Pursh) Rydberg][33]	**rjm**:pineapple weed; **j**:rayless chamomile	61;j228;m210
Micropus Linnaeus		61;j316;m211
M. californicus Fischer & C.A.Meyer [**jk**:*M. c.* Fischer & C.A.Meyer var. *c.*]	j:slender cottonweed	61;j316;m211

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[31] *Chrysopsis*, or 'goldenaster' also included in *Heterotheca* in j

[32] Present author has observed the nominate ssp. in these mountains. According to Tim Ross (pers. com. June, 1998), he cites a collections of ssp. *densifolia* (E.Greene) Keck from the Santa Monica Mountains in a paper (in prep.) titled "Additions to the Los Angeles County Flora"

[33] Indicated native species in **rm**, alien in j

scientific name(s)	common name(s)	reference pages
Asteraceae (cont.)		
Microseris D.Don		62;j316;m211
M. douglasii (DC.) Schultz-Bipontinus ssp. *d.*		62;j318;m211
M. douglasii (DC.) Schultz-Bipontinus ssp. *tenella* (A.Gray) Chambers		62;j318;m212
M. elegans E.Greene I A.Gray [**j**:*M. e.* A.Gray]		62;j318;m212
M. heterocarpa (Nuttall) Chambers [**j**:*Stebbinsoseris h.* (Nuttall) Chambers]		62;j345;m212
M. linearifolia (Nuttall) Schultz-Bipontinus [**k**:*M. lindleyi* (DC.) A.Gray; **j**:*Uropappus lindleyi* (DC.) Nuttall; **m**:*M. linearifolia* (DC.) Schultz-Bipontinus]	j:silver puffs	62;j355;m212
Monolopia DC.		62;j319;m212
M. lanceolata Nuttall		62;j319;m212
Osteospermum Linnaeus		62;j322;m--
O. fruticosum (L.) Norlindh[34]	r:trailing African daisy	62;j--;m--
Pentachaeta Nuttall [**m**:*Chaetopappa* DC.]		62;j322;m139
P. lyonii A.Gray [**m**:*Chaetopappa l.* (A.Gray) Keck]	j:Lyon's pentachaeta	62;j323;m139
Perityle Bentham		62;j323;m215
P. emoryi Torrey [**m**:*P. e.* Torrey *in* Emory]		62;j323;m215
Picris Linnaeus	j:ox-tongue; **m**:ox tongue	63;j326;m218
P. echioides L.	**rj**:bristly ox-tongue	63;j326;m218
Pluchea Cassini		63;j326;m219
P. odorata (L.) Cassini var. *o.* [**j**:*P. o.* (L.) Cassini; **m**:*P. purpurascens* (Swartz) DC.]	**rm**:marsh-fleabane; j:salt marsh fleabane	63;j326;m219
Psilocarphus Nuttall	j:woolly-heads, woolly marbles	63;j329;m220
P. tenellus Nuttall var. *t.*		63;j329;m220
Rafinesquia Nuttall		63;j331;m221
R. californica Nuttall	j:California chicory	63;j332;m221
Senecio Linnaeus	**rjm**:groundsel, ragwort; j:butterweed	63;j336;m223
S. aphanactis E.Greene		63;j337;m224
S. breweri Burtt-Davy		63;j338;m224
S. californicus DC.		63;j338;m224
S. douglasii DC. var. *d.* [**jk**:*S. flaccidus* Lessing var. *d.* (DC.) B.L.Turner & T.M.Barkley]		63;j338;m226
S. mikanioides Otto ex Walpers [**j**:*S. m.* Walpers; **m**:*S. m.* Otto][35]	**rm**:German-ivy	63;j340;m226
S. vulgaris L.	**rm**:common groundsel	63;j342;m227
Silybum Adanson	**jm**:milk thistle	64;j342;m227
S. marianum (L.) Gaertner	r:milk-thistle	64;j342;m227
Solidago Linnaeus	**rjm**:goldenrod	64;j342;m228
S. californica Nuttall	**jm**:California goldenrod	64;j343;m228

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[34] Name not found in **jmk**.

[35] Mabberley (1997) places this species in the genus *Delairea* Lemaire, containing the single South African species *D. odorata* Lemaire, or cape ivy (see also Moore 1997; California Exotic Pest Plant Council News vol. 5 no. 4).

scientific name(s)	common name(s)	reference pages
Asteraceae *Solidago* (cont.)		
S. occidentalis (Nuttall) Torrey & A.Gray [**jk**:*Euthamia o.* Nuttall][36]	**jm**: western goldenrod; **j**:grass-leaved goldenrods[37]	64;**j**266;**m**228
Soliva RuízLópez & Pavón		64;**j**343;**m**229
S. daucifolia Nuttall [**jk**:*S. sessilis* RuízLópez & Pavón]		64;**j**344;**m**229
Sonchus Linnaeus	**j**:sow thistle; **m**:sow-thistle	64;**j**344;**m**229
S. asper (L.) Hill [**k**:*S. a.* (L.) Hill ssp. *a.*]	**j**:prickly sow thistle	64;**j**344;**m**230
S. oleraceus L.	**r**:sow-thistle; **j**:common sow thistle	64;**j**344;**m**230
Stephanomeria Nuttall		64;**j**345;**m**230
S. cichoriacea A.Gray		64;**j**346;**m**230
S. diegensis Gottlieb		64;**j**346;**m**--
S. exigua Nuttall ssp. *coronaria* (E.Greene) Gottlieb[38]		65;**j**346;**m**231
S. virgata Bentham [**jk**:*S. v.* Bentham ssp. *v.*]		65;**j**348;**m**231
Stylocline Nuttall	**j**:nest straw	65;**j**348;**m**232
S. filaginea (A.Gray) A.Gray [**j**:*Ancistrocarphus filagineus* A.Gray]	**j**:woolly fishhooks[39]	65;**j**196;**m**232
S. gnaphaloides Nuttall[40]	**j**:everlasting nest straw	65;**j**349;**m**232
Taraxacum Linnaeus [**k**:*T.* G.H.Weber *ex* Wiggers; **m**:*T.* Zinn]	**rm**:dandelion	65;**j**350;**m**234
T. officinale Wiggers [**k**:*T. o.* G.H.Weber *ex* Wiggers ssp. *o.* ?]	**rm**:common dandelion	65;**j**350;**m**234
Tragopogon Linnaeus	**r**:goat's-beard; **jm**:goat's beard	65;**j**354;**m**236
T. porrifolius L.	**rjm**:oyster plant, salsify	65;**j**354;**m**236
Venegasia DC.	**j**:canyon-sunflower	65;**j**356;**m**237
V. carpesioides DC.		65;**j**356;**m**239
Verbesina Linnaeus	**j**:crownbeard **m**:crown-beard	65;**j**356;**m**239
V. encelioides (Cavanilles) Bentham & Hooker f. *ex* A.Gray ssp. *exauriculata* (Robinson & Greenman) J.R.Coleman [**j**:*V. e.* (Cavanilles) A.Gray ssp. *exauriculata* Robinson & Greenman) J.R.Coleman; **m**:*V. e.* (Cavanilles) Bentham & Hooker var. *exauriculata* Robinson & Greenman]	**j**:golden crownbeard	65;**j**356;**m**239
Xanthium Linnaeus	**rjm**:cocklebur	65;**j**359;**m**241
X. spinosum L.[41]	**rm**:spiny clotbur; **j**:spiny cocklebur	65;**j**359;**m**241
X. strumarium L. var. *canadense* (P.Miller) Torrey & A.Gray [**j**:*X. s.* L.]	**j**:cocklebur	65;**j**360;**m**241

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[36] *Euthamia* Nuttall *ex* Cassini.

[37] Common name applied to genus *Euthamia*, not specifically attributed to *E. occidentalis* in **j**.

[38] Subspecies inadvertently omitted in **m**. See Munz and Keck 1959 p. 1296.

[39] Common name applied to monotypic genus in **j**.

[40] Frequently spelled *S. gnaphalioides*, as in **rkm**, although **j** indicates this is incorrect.

[41] Indicated alien species in **r**, native in **j**.

scientific name(s)	common name(s)	reference pages
Asteraceae *Xanthium* (cont.)		
X. strumarium L. var. *glabratum* (DC.) Cronquist [j:*X. s.* L.]	j:cocklebur	65;j360;m241
Bataceae C.Martius *ex* Perleb [**m:Batidaceae** auctt.]	rj:saltwort family; m:batis family	66;j360;m242
Batis (P.Browne) Linnaeus [**k**:*B.* P.Browne; **m**:*B.* Linnaeus]	m:saltwort	66;j362;m242
B. maritima L.	rj:saltwort; j:beachwort	66;j362;m242
Berberidaceae Jussieu	rjmf:barberry family	66;j362;m242;f272
Mahonia Nuttall [**jmf**:*Berberis* Linnaeus]	rjf:barberry; jf:Oregon-grape; f:berbéris, algerita	66;j362;m242;f272
M. pinnata (Lagasca) Fedde [**jmf**:*Berberis pinnata* Lagasca ssp. *p.*]		66;j363;m245;f286
Betulaceae A.Gray	rjmf:birch family	66;j364;m245;f507
Alnus P.Miller[42]	rjmf:alder; f:aulne, aune	66;j364;m245;f509
A. rhombifolia Nuttall	rjmf:white alder; f:California alder	66;j364;m245;f512
Boraginaceae Jussieu	rjm:borage family	66;j366;m246
Amsinckia Lehmann	r:fiddleneck; jm:fiddleneck	67;j367;m247
A. intermedia Fischer & C.A.Meyer [j:*A. menziesii* (Lehmann) A.Nelson & J.F.Macbride var. *i.* (Fischer & C.A.Meyer) Ganders]	r:common fiddleneck; j:rancher's fireweed	67;j368;m248
A. menziesii (Lehmann) A.Nelson & J.F.Macbride [j:*A. m.* (Lehmann) A.Nelson & J.F.Macbride var. *m.*]		67;j368;m248
Cryptantha Lehmann *ex* Fischer & C.A.Meyer [j:*C.* Lehmann; **k**:*C.* Lehmann *ex* G.Don]	r:popcorn flower	67;j369;m250
C. clevelandii E.Greene [**k**:*C. c.* E.Greene var. *c.*?]		67;j373;m253
C. intermedia (A.Gray) E.Greene		67;j374;m255
C. micromeres (A.Gray) E.Greene		67;j376;m256
C. microstachys (E.Greene *ex* A.Gray) E.Greene [j:*C. m.* (A.Gray) E.Greene		67;j376;m256
C. muricata (Hooker & Arnott) A.Nelson & J.F.Macbride [**mk**:*C. m.* (Hooker & Arnott) A.Nelson & J.F.Macbride var. ?][43]		67;j376;m256
Heliotropium Linnaeus	jm:heliotrope	67;j381;m259
H. curassavicum L. var. *oculatum* (A.A.Heller) I.M.Johnston [j:*H. c.* L.]		67;j381;m261
Pectocarya DC. *ex* Meissner		67;j384;m262
P. linearis (RuízLópez & Pavón) DC. var.[44] *ferocula* I.M.Johnston [j:*P. l.* (RuízLópez & Pavón) DC. ssp. *f.* (I.M.Johnston) Thorne; **m**:*P. l.* DC. var. *f.* I.M.Johnston]		67;j384;m262
P. penicillata (Hooker & Arnott) A.DC.		67;j384;m263

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[42] Erroneous substitution of Hill for P. Miller in **rm**?

[43] Our variety is unspecified in **r**; distribution in **m** suggests var. *jonesii* (A.Gray) I.M.Johnston, however, Tim Ross (pers. com. June 1998) suspects ours are the nominate variety.

[44] Varieties and subspecies not recognized in **k**.

scientific name(s)	common name(s)	reference pages
Boraginaceae (cont.)		
Plagiobothrys Fischer & C.A.Meyer	r:popcorn flower; j:popcornflower	68;j386;m263
P. acanthocarpus (Piper) I.M.Johnston	j:adobe allocarya	70;j387;m264
P. canescens Bentham [**k**:*P. c.* Bentham var. *c.*]		70;j388;m265
P. nothofulvus (A.Gray) A.Gray		70;j389;m266
Brassicaceae Burnett	rjm:mustard family	68;j392;m267
Arabis Linnaeus	r:rock cress; m:rock-cress	70;j396;m270
A. glabra (L.) Bernhardi var. *g.*[45]	rm:tower-mustard	70;j400;m271
A. sparsiflora Nuttall ex Torrey & A.Gray var. *californica* Rollins [**j**:*A. s.* Torrey & A.Gray var. *c.* Rollins; **m**:*A. s.* Nuttall *in* Torrey & A.Gray var. *c.* Rollins; **k**:*A. s.* Nuttall var. *c.* Rollins]		70;j403;m275
Athysanus E.Greene		70;j404;m275
A. pusillus (Hooker) E.Greene		70;j404;m275
Barbarea Scopoli [**k**:*B.* Aiton f.]	rm:winter-cress	70;j404;m276
B. orthoceras Ledebour		70;j404;m276
Brassica Linnaeus	rjm:mustard; j:turnip	71;j406;m276
B. nigra (L.) W.D.J.Koch	rjm:black mustard	71;j406;m277
B. rapa L. ssp. *sylvestris* (L.) Janchen [**j**:*B. r.* L.; **k**:*B. r.* L. ssp. *r.*]	r:common mustard; j:turnip; jm:field mustard	71;j406;m277
Cakile P.Miller[46]	rm:sea-rocket j:sea rocket	71;j406;m278
C. maritima Scopoli		71;j406;m278
Capsella Medicus [**k**:Medickus]	rm:shepherd's-purse; j:shepherd's purse	71;j407;m279
C. bursa-pastoris (L.) Medikus		71;j407;m279
Cardamine Linnaeus	j:bitter-cress, toothwort	71;j407;m279
C. californica (Nuttall) E.Greene[47] [**j**:*C. c.* (Torrey & A.Gray) E.Greene; **k**:*C. c.* (Nuttall) E.Greene var. *c.*]	j;milk-maids, toothwort	71;j408;m279
C. oligosperma Nuttall [**j**:*C. o.* Torrey & A.Gray]		71;j408;m281
Cardaria Desvaux	j:white-top, hoary cress	71;j410;m281
C. draba (L.) Desvaux [**k**:*C. d.* (L.) Desvaux ssp. *d.*?]	r:hoary-cress; m:hoary cress; j:heart-podded hoary cress	71;j410;m281
C. pubescens (C.A.Meyer) Rollins var. *elongata* Rollins; **jk**:*C. p.* (C.A.Meyer) Jarmolenko]	rm:whitetop; j:white-top	71;j410;m281
Caulanthus S.Watson[48]	j:jewelflower	71;j410;m304
C. lasiophyllus (Hooker & Arnott) Payson var. *l.* [**j**:*Guillenia lasiophylla* (Hooker & Arnott) E.Greene; **m**:*Thelypodium lasiophyllum* (Hooker & Arnott) E.Greene var. *l.*]	j:California mustard	71;j424;m305

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[45] Error in j gives Bentham as author, should be Bernhardi.

[46] Error in m substitute Hill for P.Miller?

[47] Variety not specified in r. According to j, both the nominate var and var. *integrifolia* (Torrey & A.Gray) Rollins potentially occur in the SMM.

[48] Our single species is included in j as the genus *Guillenia* E.Greene and in m as *Thelypodium* Endlicher.

scientific name(s)	common name(s)	reference pages
Brassicaceae (cont.)		
Coronopus Gaertner [**m**:C. Treviranus; **k**:C. Zinn]	**rm**:wart-cress; **j**:wart cress, swine cress	71;j413;m285
C. didymus (L.) Smith		71;j413;m285
Descurainia Webb & Berthelot	**rjm**:tansy-mustard	72;j413;m285
D. pinnata (Walter) Britton ssp. *menziesii* (DC.) Detling		72;j416;m286
D. sophia (L.) Webb ex Prantl [**jm**:*D. s.* (L.) Webb]		72;j416;m287
Diplotaxis DC.	**j**:wall rocket	72;j416;m287
D. tenuifolia (L.) DC.	**rm**:wall-rocket	72;j416;m287
Dithyrea Harvey	**rj**:**m**spectacle-pod	72;j416;m287
D. maritima A.Davidson [**j**:*D. m.* (A.Davidson) A.Davidson]	**j**:beach spectacle-pod	72;j416;m288
Erysimum Linnaeus	**rjm**:wallflower	72;j421;m289
E. capitatum (Douglas) E.Greene ssp. *capitatum* [**k**:*E. c.* (Douglas ex Hooker) E.Greene var. *c.*]	**j**:western wallflower	72;j421;m290
E. suffrutescens (Abrams) G.Rossbach [**j**:*E. insulare* E.Greene ssp. *s.* (Abrams) R.A.Price; **k**:*E. i.* E.Greene][49]	**j**:suffrutescent wallflower	72;j422;m290
Hirschfeldia Moench [**m**:*Brassica* (part)]		72;j425;m--
H. incana (L.) Lagrèze-Fossat [**m**:*Brassica geniculata* (Desfontaines) J.Ball]		72;j425;m276
Lepidium Linnaeus	**rjm**:peppergrass; **j**:pepperwort	72;j426;m291
L. lasiocarpum Nuttall [**j**:*L. l.* Torrey & A.Gray var *l.*; **k**:*L. l.* Nuttall var. *l.*]		72;j429;m294
L. latifolium L.		72;j429;m--
L. latipes Hooker var. *l.* [**k**:*L. l.* Hooker]	**j**:dwarf peppergrass	73;j429;m294
L. oblongum Small var. *o.*[50]		73;j429;m--
L. virginicum L. var. *pubescens* (E.Greene) C.L.Hitchcock [**jm**:*L. v.* L. var. *p.* (E.Greene) Thellung]		73;j430;m295
Lobularia Desvaux	**rm**:sweet-alyssum; **j**:sweet alyssum	73;j431;m296
L. maritima (L.) Desvaux		73;j431;m296
Matthiola R.Brown [**k**:M. Aiton f.]	**rjm**:stock	73;j432;m297
M. incana (L.) R.Brown [**k**:*M. i.* (L.) Aiton f. var. ?]		73;j432;m297
Nasturtium R.Brown[51]		73;j--;m--
N. officinale R.Brown *in* Aiton [**jk**:*Rorippa nasturtium-aquaticum* (L.) Hayek; **m**:*R. n.-a.* (L.) Schinz & Thellung]	**r**:water-cress; **j**:water cress	73;j434;m298
Raphanus Linnaeus	**j**:wild radish; **m**:radish	73;j432;m297
R. raphanistrum L.	**rjm**:jointed charlock	73;j432;m297
R. sativus L.	**rm**:wild radish; **j**:radish	73;j434;m297

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[49] *E. suffrutescens* var. *s.* separate from *E. insulare* given in **k**.

[50] Considerered alien in **r**, but native in **j**. Both the nominate var. and var. *insulare* C.L.Hitchcock are potentially present in SMM

[51] Our single species included in **j** as the genus *Rorippa* Scopoli.

scientific name(s)	common name(s)	reference pages
Brassicaceae (cont.)		
Rorippa Scopoli	j:yellow cress, water cress	73;j434;m298
R. curvisiliqua (Hooker) Bessey *ex* Britton[j:*R. c.* (Hooker) Britton; **m**:*R. c.* (Hooker) Bessey]		73;j435;m298
Sinapis Linnaeus		73;j436;m--
S. arvensis L. [**m**:*Brassica kaber* (DC.) Wheeler]	j:charlock	73;j436;m277
Sisymbrium Linnaeus		74;j436;m301
S. altissimum L.	rm:tumble-mustard; j:tumble or Jim Hill mustard	74;j436;m301
S. irio L.	rm:London-rocket; j:London rocket	74;j438;m301
S. officinale (L.) Scopoli [j:*S. o.* L.]	r:hedge-mustard; j:hedge mustard	74;j438;m301
S. orientale L.		74;j438;m302
Stanleya Nuttall	rjm:prince's plume	74;j438;m302
S. pinnata (Pursh) Britton var. *p.* [**m**:*S. p.* (Pursh) Britton ssp. *p.*]		74;j438;m302
Streptanthus Nuttall[52]	j:jewelflower	74;j439;m303
S. heterophyllus Nuttall [**jk**:*Caulanthus h.* var. *h.* (Nuttall) Payson]		74;j412;m304
Thysanocarpus Hooker	rm:lace-pod, fringe-pod; j:lacepod, fringepod	74;j447;m306
T. curvipes Hooker [**m**:*T. c.* Hooker var. *c.*]		74;j447;m306
T. laciniatus Nuttall *ex* Torrey & A.Gray [j:*T. l.* Torrey & A.Gray; **k**:*T. c.* Nuttall]		74;j447;m306
Tropidocarpum Hooker		74;j447;m307
T. gracile Hooker		74;j448;m307
Buddlejaceae Wilhelm[53]	j:Buddleja family	75;j448;m559
Buddleja Linnaeus[54]	j:butterfly bush	75;j448;m560
B. davidii Franchet	j:butterfly bush, summer lilac	75;j448;m--
B. saligna Willdenow		75;j448;m--
Cactaceae Jussieu	rjm:cactus family	75;j450;m308
Opuntia P.Miller	rjm:prickly-pear; jm:cholla	75;j452;m314
O. ficus-indica (L.) P.Miller	j:Indian-fig; m:Indian fig	75;j454;m317
O. littoralis (Engelmann) Cockerell var. *l.*	r:coastal prickly-pear	75;j455;m317
O. oricola Philbrick		75;j455;m318
O. prolifera Engelmann	j:cholla	75;j456;m320
Callitrichaceae Berchtold & J.Presl	rjm:water-starwort family	75;j456;m321
Callitriche Linnaeus	j:water-starwort	75;j458;m321
C. marginata Torrey		75;j458;m322

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[52] Our single species included in **j** as the genus *Caulanthus* S.Watson.

[53] Treated as the logania family; Loganiaceae Martinov *sensu lato* in **m**

[54] Ours not treated in **m**

scientific name(s)	common name(s)	reference pages
Campanulaceae Jussieu	r:bluebell family; jm:bellflower family	75;j459;m322
Githopsis Nuttall	j:bluecup	76;j462;m323
G. diffusa A.Gray ssp. *d.*		76;j462;m323
Lobelia Linnaeus		76;j465;m324
L. dunnii E.Greene var. *serrata* (A.Gray) McVaugh		76;j465;m325
Nemacladus Nuttall		76;j465;m325
N. ramosissimus Nuttall		76;j466;m326
Capparidaceae Jussieu [=Capparaceae]	jm:caper family	76;j469;m328
Cleome Linnaeus[55]		76;j469;m329
C. isomeris E.Greene [j:*Isomeris arborea* Nuttall; **m**:*I. a.* Nuttall var. *a.*]	jm:bladderpod	76;J470;m330
Caprifoliaceae Jussieu	rjm:honeysuckle family	76;j471;m331
Lonicera Linnaeus	rjm:honeysuckle	76;j472;m331
L. hispidula (Lindley) Douglas *ex* Torrey & A.Gray var. *vacillans* (Bentham) A.Gray [**jm**:*L. h.* Douglas var. *v.* A.Gray]		76;j474;m332
L. subspicata Hooker & Arnott var. *johnstonii* Keck [j:*L. s.* H. & A. var. *denudata* Rehder]		76;j474;m332
Sambucus Linnaeus	rjm:elderberry	76;j474;m333
S. mexicana K.Presl *ex* DC. [**jm**:*S. m.* C.Presl]	j:blue elderberry	76;j474;m333
Symphoricarpos Duhamel de Monceau	rjm:snowberry; j:waxberry	77;j475;m333
S. mollis Nuttall [**m**:*S. m.* Nuttall *in* Torrey & A.Gray]	j:creeping snowberry, trip vine	77;j475;m334
Caryophyllaceae Jussieu	rjm:pink family	77;j475;m334
Arenaria Linnaeus[56]	jm:sandwort	77;j478;m335
A. douglasii Fenzl *ex* Torrey & A.Gray [j:*Minuartia d.* (Torrey & A.Gray) Mattfeld; **k**:*M. d.* (Fenzl *ex* Torrey & A.Gray) Mattfeld]		77;j484;m337
Cardionema DC.		77;j480;m339
C. ramosissimum (J.A.Weinmann) A.Nelson & J.F.Macbride		77;j480;m339
Cerastium Linnaeus	jm:mouse-ear chickweed	77;j480;m339
C. glomeratum Thuillier	rj:mouse-ear chickweed	77;j481;m339
Herniaria Linnaeus		77;j481;m340
H. cinerea DC. [j:*H. hirsuta* L. ssp. *c.* (DC.) Coutinho]		77;j482;m340
Polycarpon Linnaeus	j:polycarp	77;j486;m340
P. depressum Nuttall		77;j486;m340
P. tetraphyllum (L.) L.	j:four-leaved allseed	78;j486;m340
Silene Linnaeus	jm:catchfly, campion	78;j488;m342
S. antirrhina L.		78;j491;m343
S. gallica L.		78;j491;m343
S. laciniata Cavanilles ssp. *major* C.L.Hitchcock & Maguire		78;j492;m343
S. multinervia S.Watson		78;j492;m344
S. verecunda S.Watson ssp. *platyota* (S.Watson) C.L.Hitchcock & Maguire		78;j493;m345

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[55] Our single species in the genus *Isomeris* Nuttall in **jm**.

[56] Our single species included in the genus *Minuartia* L. in **j**

scientific name(s)	common name(s)	reference pages
Caryophyllaceae (cont.)		
Spergula Linnaeus	**jm**:spurrey	78;j493;m345
S. arvensis L. ssp. *a.* [**k**:*S. arvense* L.]	j:stickwort, starwort	78;j493;m345
Spergularia J. & C.Presl [**k**:*S.* (Persoon) J. & K.Presl]	**jm**:sand-spurrey	78;j493;m345
S. bocconei[57] (Scheele) Aschers & Graebner [j:*S. b.* (Scheele) Merino; **m**:*S. b.* (Scheele) Foucaud; **k**:*S. b.* (Scheele) Foucaud *ex* Merino]		78;j494;m345
S. macrotheca (Hornemann) Heynhold var. *m.*		78;j494;m347
S. marina (L.) Grisebach [**k**:*S. salina* J. & K.Presl var. *s.*]		78;j494;m347
Stellaria Linnaeus	**jm**:chickweed, starwort	78;j496;m348
S. media (L.) Villars	**rjm**:common chickweed	78;j497;m348
S. nitens Nuttall	j:shining chickweed	78;j497;m348
Chenopodiaceae Ventenat	**rjm**:goosefoot family	79;j500;m351
Arthrocnemum Moquin-Tandon[58]		79;j--;m--
A. subterminale (Parish) Standley [**jm**:*Salicornia subterminalis* Parish]		79;j514;m368
Atriplex Linnaeus	**rjm**:saltbush	79;j501;m352
A. californica Moquin-Tandon [**m**:*A. c.* Moquin-Tandon *in* DC.]		79;j503;m354
A. coulteri (Moquin-Tandon) D.Dietrich	j:Coulter's saltbush	79;j503;m355
A. hastata L. (misapplied) [j:*A. triangularis*[59] Willdenow; **m**:*A. patula* L. ssp. *h.* (L.) H.M.Hall & F.E.Clements (misapplied); **k**:*A. prostrata* Bouchér *ex* DC.][60]	j:spearscale	79;j505;m357
A. lentiformis (Torrey) S.Watson ssp. *breweri* (S.Watson) H.M.Hall & F.E.Clements [j:*A. l.* (Torrey) S.Watson ssp. *l.*]	j:big saltbush	79;j504;m355
A. leucophylla (Moquin-Tandon) D.Dietrich		80;j504;m355
A. polycarpa (Torrey) S.Watson		80;j505;m357
A. rosea L.	**rm**:redscale; j:tumbling oracle	80;j505;m357
A. semibaccata R.Brown	**rjm**:Australian saltbush	80;j505;m358
A. serenana A.Nelson var. *s.*	j:bractscale	80;j505;m358
A. watsonii A.Nelson		80;j505;m358
Bassia Allioni		80;j506;m359
B. hyssopifolia (Pallas) Kuntze [**k**:*B. h.* (Pallas) Volkart]		80;j506;m359
Beta Linnaeus	**jm**:beet	80;j506;m359
B. vulgaris L. [**k**:*B. v.* L. ssp. *v.*]	**rm**:garden beet	80;j506;m359
Chenopodium Linnaeus	**rjm**:goosefoot, pigweed	80;j506;m359
C. ambrosioides L. [**k**:*C. a.* L. var. *a.*]	**rj**:Mexican tea; **m**:Mexican-tea	80;j508;m360

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[57] Spelling change indicated in *The Jepson Globe* vol. 7 no. 2 1996.

[58] Our single species treated in the genus *Salicornia* L. in **jm**

[59] Error in j indicates that *A. patula* ssp. *p.* is misapplied; corrected to ssp. *hastata* in *The Jepson Globe* vol. 7 no. 2 1996.

[60] There is considerable confusion here. According to **k**, *A. triangularis* (j) is a synonym for *A. prostrata*, while at the same time indicating that *A. patula* ssp. *hastata* (**m**) is not synonymous. See also *A. subspicata* (Nuttall) Rydberg and synonyms.

scientific name(s)	common name(s)	reference pages
Chenopodiaceae *Chenopodium* (cont.)		
C. berlandieri Moquin-Tandon var. *zschakei* (J.Murray) J.Murray [**j**:*C. b.* Moquin-Tandon; **k**:*C. b.* Moquin-Tandon var. *z.* (J.Murray) J.Murray *ex* Ascherson]	j:pitseed goosefoot	80;j508;m361
C. californicum (S.Watson) S.Watson		81;j508;m361
C. macrospermum Hooker f. var. *farinosum* (S.Watson) J.T.Howell [**j**:*C. m.* Hooker f. var. *halophilum* (Philippi) Standley]		81;j510;m363
C. multifidum L.		81;j510;m363
C. murale L.		81;j510;m364
C. pumilio R.Brown		81;j510;m364
C. strictum Roth var. *glaucophyllum* (Aellen) Wahl [**k**:*C. s.* Roth ssp. *g.* (Aellen) Aellen & Just]		81;j510;m364
Salicornia Linnaeus	rjm:pickleweed; m:samphire, glasswort	81;j512;m367
S. bigelovii Torrey		81;j512;m368
S. europaea L. [?**k**:*S. maritima* Wolff & Jeffries]		81;j514;m368
S. virginica L.		81;j514;m368
Salsola Linnaeus	m:Russian-thistle	81;j514;m368
S. australis R.Brown [**j**:*S. tragus* L.; **m**:*S. iberica* Sennen & Pau; **k**:*S. kali* L. ssp. *tragus* (L.) Aellen]	rj:Russian thistle	81;j514;m368
Suaeda Forsskål [**k**:*S.* Forsskål *ex* Scopoli]	rjm:sea-blite; jm:seepweed	81;j514;m369
S. calceoliformis (Hooker) Moquin-Tandon [**m**:*S. depressa* (Pursh) S.Watson var. *erecta* S.Watson (misapplied)]	j:horned sea-blite	81;j515;m369
S. californica S.Watson var. *pubescens* Jepson (misapplied) [**jk**:*S. taxifolia* (Standley) Standley][61]	j:woolly sea-blite	82;j515;m369
S. esteroa W.Ferren & S.Whitmore	j:estuary sea-blite	82;j515;m--
Cistaceae Jussieu	rjm:rock-rose family	82;j515;m370
Helianthemum P.Miller	r:rock-rose; j:sun-rose, rush-rose	82;j516;m370
H. scoparium Nuttall var. *vulgare* Jepson [**jk**:*H. s.* Nuttall]	j:peak rush-rose	82;j516;m371
Convolvulaceae Jussieu	rjm:morning-glory family	82;j516;m371
Calystegia R.Brown	jm:morning-glory	82;j517;m371
C. macrostegia (E.Greene) Brummitt ssp. *cyclostegia* (House) Brummitt		82;j518;m374
C. soldanella (L.) R.Brown [**k**:*C. s.* (L.) R.Brown *ex* Roemer & J.A.Schultes]	rm:beach morning-glory	82;j520;m374
Convolvulus Linnaeus	rjm:morning-glory, bindweed	82;j521;m375
C. arvensis L.	rjm:bindweed; j:orchard morning-glory	82;j521;m375

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[61] According to Tim Ross (pers. com. June 1998), in southern California, the name is apparently misapplied to *S. taxifolia*.

scientific name(s)	common name(s)	reference pages
Convolvulaceae (cont.)		
Cressa Linnaeus	rjm:alkali weed	82;j521;m375
C. truxillensis HBK. var. *vallicola* (A.A.Heller) Munz [jk:*C. t.* Kunth]	j:alkali weed	82;j521;m375
Cuscuta Linnaeus[62]	rjm:dodder	82;j538;m376
C. californica Hooker & Arnott[63]		83;j539;m376
C. campestris Yuncker [j:*C. pentagona* Engelmann; k:*C. p.* Engelmann var. *p.*]		83;j539;m377
C. ceanothi Behr [j:*C. subinclusa* Durand & Hilgard]		83;j539;m377
C. salina Engelmann var. *major* Yuncker		83;j539;m378
Dichondra Forster & Forster f.[64]		83;j521;m378
D. occidentalis House	j:western dichondra	83;j521;m379
Ipomoea Linnaeus	jm:morning-glory	83;j521;m379
I. purpurea (L.) Roth	rjm:common morning-glory	83;j522;m379
Cornaceae (Dumortier) Dumortier	rjm:dogwood family	83;j522;m379
Cornus Linnaeus	j:dogwood	83;j522;m379
C. glabrata Bentham	rjm:brown dogwood	83;j522;m381
Crassulaceae J.Saint-Hilaire	rjm:stonecrop family	83;j524;m382
Crassula Linnaeus		83;j525;m382
C. connata (RuízLópez & Pavón) A.Berger [m:*C. erecta* (Hooker & Arnott) A.Berger; k:*C. c.* (RuízLópez & Pavón) Berger var. *c.*]	j:pygmyweed	83;j525;m382
Dudleya Britton & Rose	rm:live-forever	84;j525;m383
D. blochmaniae (Eastwood) Moran ssp. *b.*	j:Blochman's dudleya	84;j527;m385
D. cymosa (Lemaire) Britton & Rose ssp. *ovatifolia*[65] (Britton) Moran	j:Santa Monica Mountains dudleya	84;j528;m385
D. cymosa (Lemaire) Britton & Rose ssp. *marcescens*[66] Moran	j:Santa Monica Mountains marcescent dudleya	84;j528;m385
D. lanceolata (Nuttall) Britton & Rose		85;j528;m386
D. multicaulis (Rose) Moran[67]	j:many-stemmed dudleya	85;j528;m386
D. parva Rose & A.Davidson [j:*D. abramsii* Rose ssp. *p.* (Rose & A.Davidson) J.Bartel]	j:Conejo dudleya	85;j527;m387
D. pulverulenta (Nuttall) Britton & Rose ssp. *p.* [k:*D. p.* (Nuttall) Britton & Rose]		85;j530;m387
D. verityi K.Nakai	j:Verity's dudleya	85;j530;m--
Sedum Linnaeus	rm:stonecrop	85;j531;m388
S. spathulifolium Hooker [m:*S. s.* Hooker ssp. *anomalum* (Britton) Clausen & Uhl; k:*S. s.* Hooker ssp. *s.*]		85;j534;m389

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[62] Included in family Cuscutaceae Berchtold & J.Presl in jk

[63] Varieties not specified in r Ours could include var. *breviflora* Englemann, var. *c.*, and var. *papillosa* Yuncker,, based on distribution in j

[64] J.R. Forster & G Forster (father and son).

[65] Includes the so-called 'Agoura' form *D. c.* ssp. *agourensis* K.Nakai (retained in k), and the 'Topanga' form, as discussed in r.

[66] Includes the so-called 'Hidden Valley' and 'Little Sycamore' forms discussed in r.

[67] "Probably extinct in the range" according to r.

scientific name(s)	common name(s)	reference pages
Cucurbitaceae Jussieu	**rjm**:gourd family	85;j535;m389
Cucurbita Linnaeus	**rjm**:gourd; **j**:squash; **m**:melon, pumpkin	85;j536;m392
C. foetidissima HBK. [**jk**:*C. f.* Kunth]	**rjm**:calabazilla	85;j536;m392
Marah Kellogg	**rj**:man-root; **jm**:wild cucumber; **m**:big-root	86;j536;m392
M. macrocarpus (E.Greene) E.Greene var. *m.*		86;j538;m393
Datiscaceae Berchtold & J.Presl	**jm**:Datisca family	86;j540;m393
Datisca Linnaeus		86;j540;m393
D. glomerata (C.Presl) Baillon [**k**:*D. g.* (K.Presl) Baillon]	**j**:Durango root	86;j540;m393
Elatinaceae Cambessèdes	**rjm**:waterwort family	86;j542;m396
Elatine Linnaeus	**jm**:waterwort	86;j542;m396
E. californica A.Gray		86;j542;m396
Ericaceae Jussieu	**rjm**:heath family	86;j544;m397
Arctostaphylos Adanson	**rjm**:manzanita	86;j545;m398
A. glandulosa Eastwood ssp. *mollis*[68] (J.E.Adams) P.V.Wells		86;j551;m400
A. glauca Lindley	**r**:bigberry manzanita	86;j552;m400
Comarostaphylis Zuccarini		86;j559;m402
C. diversifolia (C.Parry) E.Greene ssp.[69] *planifolia* (Jepson) G.D.Wallace *ex* Thorne [**j**:*C. d.* (C.Parry) E.Greene ssp. *p.* (Jepson) G.D.Wallace]	**m**:summer-holly	86;j559;m402
Euphorbiaceae Jussieu	**rj**:spurge family	87;j567;m405
Chamaesyce S.F.Gray[70]	**j**:prostrate spurge	87;j568;m409
C. albomarginata (Torrey & A.Gray) Small [**m**:*Euphorbia a.* Torrey & A.Gray]	**jm**:rattlesnake weed	87;j570;m411
C. maculata (L.) Small [**m**:*Euphorbia m.* L.]	**j**:spotted spurge	87;j571;m413
C. melanadenia (Torrey) Millspaugh [**m**:*Euphorbia m.* Torrey]		87;j571;m413
C. polycarpa (Bentham) Millspaugh var. *p.* [**j**:*C. p.* (Bentham) Millspaugh; **m**:*Euphorbia p.* Bentham var. *p.*; **k**:*C. p.* (Bentham) Millspaugh *ex* Parish var. *p.*]		87;j571;m414
C. serpyllifolia (Persoon) Small [**m**:*Euphorbia s.* Persoon; **k**:*C. s.* (Persoon) Small ssp. *s.*]	**j**:thyme-leaved spurge	87;j572;m415
Croton Linnaeus	**rm**:croton	87;j572;m406
C. californicus J.Mueller-Aargau [**mk**:*C. c.* J.Mueller-Aargau var. ?][71]		87;j572;m408
Eremocarpus Bentham	**jm**:turkey mullein, dove weed	87;j573;m409
E. setiger (Hooker) Bentham [**k**:*Croton setiger* Hooker][72]	**r**:turkey-mullein	87;j573;m409

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[68] **r** indicates nominate ssp. is found here, however, it is more likely to be ssp. *mollis*.

[69] A variety specified in **m**.

[70] Included in the genus *Euphorbia* in **m**.

[71] Two varieties could occur here: nominate. and var. *tenuis* (S.Watson) Ferguson, as given in **mk**.

[72] Specific epithet correctly spelled *setiger*, almost always spelled incorrectly in print as *setigerus*, according to Tim Ross (pers. com. 1998).

scientific name(s)	common name(s)	reference pages
Euphorbiaceae (cont.)		
Euphorbia Linnaeus	rjm:spurge	88;j573;m409
E. crenulata Engelmann	j:Chinese caps	88;j574;m412
E. peplus L.	rjm:petty spurge	88;j574;m414
E. terracina L.[73]		--;j--;m--
Ricinus Linnaeus	j:castor bean; m:castor-bean	88;j576;m417
R. *communis* L.	r:castor bean	88;j576;m417
Fabaceae Lindley	rm:pea family; j:legume family	89;j577;m419
Amorpha Linnaeus	rjm:false indigo	89;j583;m422
A. californica Nuttall var. *c.*		89;j583;m422
Astragalus Linnaeus	rm:locoweed; m:milkvetch, rattleweed	89;j583;m422
A. brauntonii Parish	j:Braunton's milkvetch	89;j591;m426
A. didymocarpus Hooker & Arnott var. *d.*	j:two-seeded milkvetch	89;j593;m428
A. gambelianus E.Sheldon		89;j594;m428
A. pycnostachyus A.Gray var. *lanosissimus* (Rydberg) Munz & McBurney *ex* Munz [**j**:*A. p.* A.Gray var. *l.* (Rydberg) Munz[74]	j:Ventura Marsh milkvetch	89;j602;m435
A. tener A.Gray var. *titi* (Eastwood) Barneby	j:coastal dunes milkvetch	89;j604;m435
A. trichopodus (Nuttall) A.Gray ssp. *antiselli* (Torrey & A.Gray)[75] Thorne [**jk**:*A. t.* (Nuttall) A.Gray var. *phoxus* (M.E.Jones) Barneby]		89;j604;m436
A. trichopodus (Nuttall) A.Gray ssp. *leucopsis* (Torrey & A.Gray) Thorne [**j**:*A. t.* (Nuttall) A.Gray var. *lonchus* (M.E.Jones) Barneby]		89;j604;m436
Glycyrrhiza Linnaeus	r:licorice; m:liquorice	89;j609;m441
G. lepidota (Nuttall) Pursh var. *glutinosa* (Nuttall) S.Watson [**jk**:*G. l.* Pursh]	j:wild licorice	89;j609;m442
Lathyrus Linnaeus	j:wild pea; m:pea	89;j610;m442
L. laetiflorus E.Greene ssp. *barbarae* (T.White) C.L.Hitchcock [**j**:*L. vestitus* Nuttall var. *v.*; **k**:*L. v.* E.Greene ssp. *l.* (E.Greene) Broich]		89;j614;m443
Lotus Linnaeus	m:bird's foot trefoil	90;j616;m444
L. argophyllus (A.Gray) E.Greene var. *a.*		90;j618;m445
L. corniculatus L.	j:birdfoot trefoil	90;j618;m446
L. grandiflorus (Bentham) E.Greene var. *g.*		90;j619;m446
L. hamatus E.Greene		90;j619;m447
L. micranthus Bentham		90;j620;m447
L. oblongifolius (Bentham) E.Greene var. *o.*		90;j620;m449

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[73] New addition tothe SMM (Sanders 1997). Native to the Mediterranean region, eastern Europe and the Arabian peninsula

[74] Authority in **m** appends '& McBurney' here. Believed extinct, this taxon was recently re-discovered in Oxnard.

[75] Synonym *A. t.* (Nuttall) A.Gray ssp. *a* (A.Gray *ex* Brewer & S.Watson) Thorne given in **k**

scientific name(s)	common name(s)	reference pages
Fabaceae *Lupinus* (cont.)		
L. purshianus (Bentham)[76] F.E.Clements & E.G.Clements var. *p.* [**j**:*L. p.* (Bentham) F.E.Clements & E.G.Clements; **k**:*L. unifoliolatus* (Hooker) Bentham var. *u.*]		90;j620;m449
L. salsuginosus E.Greene var.[77] *s.*		90;j620;m449
L. scoparius (Nuttall) Ottley var. *s.* [**m**:*L.* s. (Nuttall *in* Torrey & A.Gray) Ottley ssp. *s.*]	**r**:deerbush; j:Calif. broom	91;j620;m449
L. strigosus (Nuttall) E.Greene [**m**:*L.* s. (Nuttall *in* Torrey & A.Gray) E.Greene var. s.]		91;j622;m450
L. subpinnatus Lagasca (misapplied) [**jk**:*L. wrangelianus* Fischer & C.A.Meyer]		91;j622;m450
Lupinus Linnaeus	**rjm**:lupine	91;j622;m450
L. agardhianus A.A.Heller [**j**:*L. concinnus* J.G.Agardh]	j:bajada lupine	91;j628;m453
L. bicolor Lindley ssp. *microphyllus* (S.Watson) D.Dunn [**j**:*L. b.* Lindley]	j:miniature lupine	92;j628;m455
L. bicolor Lindley ssp. *tridentatus*[78] (Eastwood *ex* C.P.Smith) D.Dunn [**j**:*L. b.* Lindley]	j:miniature lupine	92;j628;m--
L. chamissonis Eschscholtz		92;j628;m456
L. formosus E.Greene var. *f.*		92;j630;m457
L. hirsutissimus Bentham	j:stinging lupine	92;j632;m459
L. latifolius J.G.Agardh[79] [**k**:*L. l* Lindley *ex* J.G.Agardh]		92;j632;m459
L. longifolius (S.Watson) Abrams		92;j633;m460
L. nanus Douglas ssp. *latifolius* (Bentham *ex* Torrey) D.Dunn [**j**:*L. n.* Bentham; **m**:*L. n.* Douglas *in* Bentham ssp. *l.* (Bentham) D.Dunn; **k**:*L. n.* Douglas *ex* Bentham ssp. *l.* (Bentham *ex* Torrey) D.Dunn]		92;j633;m460
L. polycarpus E.Greene [**j**:*L. bicolor* Lindley]		92;j628;m461
L. sparsiflorus Bentham ssp. *s.* [**j**:*L.* s. Bentham]	j:Coulter's lupine	92;j636;m462
L. subvexus C.P.Smith [**j**:*L. microcarpus* Sims var. *m.*]	j:chick lupine	92;j633;m462
L. succulentus Douglas *ex* K.Koch [**j**:*L.* s. K.Koch]	j:arroyo lupine	92;j636;m462
L. truncatus Nuttall *ex* Hooker & Arnott [**j**:*L. t.* Hooker & Arnott]		92;j636;m462
Medicago Linnaeus	**m**:medick	92;j637;m463
M. lupulina L.	**rjm**:black medick; j:yellow trefoil	92;j637;m463
M. polymorpha L.	**rm**:bur-clover; j:Calif. burclover	93;j637;m463
M. sativa L. [**k**:*M.* s. L. ssp. s.?]	**rjm**:alfalfa; j:lucerne	93;j637;m463
Melilotus P.Miller	**r**:sweet-clover; j:sweetclover	93;j637;m464
M. alba Medikus [**m**:*M. albus* Desrousseaux; **k**:*M. officinalis* (L.) Lamarck][80]	j:white sweetclover	93;j638;m464

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[76] Synonym *L. p.* F.E.Clements & E.G.Clements given in **k**.

[77] Treated as a subspecies in **m**.

[78] Inadvertently omitted from **m**. See Munz and Keck 1959 p. 816.

[79] Variety unspecified in **r**. Based on **j**, anticipate nominate var. or var. *parishii* C.P.Smith [latter given in **k** as *L. l.* Lindley *ex* J.G.Aagardh ssp. *p.* (C.P.Smith) Kenney & D.Dunn].

[80] This is confusing, since *M. alba* has white flowers, and *M. officinalis* has yellow flowers!

scientific name(s)	common name(s)	reference pages
Fabaceae *Melilotus* (cont.)		
M. indica (L.) Allioni [**m**:*M. indicus* (L.) Allioni][81]	j:sourclover	93;j638;m464
Pickeringia Nuttall [**k**:*P.* Nuttall *ex* Torrey & A.Gray	**rm**:chaparral-pea	93;j641;m465
P. montana Nuttall *ex* Torrey & A.Gray ssp. *m.* [**jm**:*P. m.* Nuttall var. *m.*]		93;j641;m465
Psoralea Linnaeus[82]		93;j610;m468
P. macrostachya DC. [**jk**:*Hoita m.* (DC.) Rydberg]		93;j610;m469
P. physodes Douglas *ex* Hooker [**j**:*Rupertia p.* (Hooker) J.Grimes; **m**:*P. p.* Douglas; **k**:*P. p.* (Douglas *ex* Hooker) J.Grimes]	r:California-tea; j:Rupert's scurf-pea[83]	93;j643;m469
Spartium Linnaeus	r:Spanish-broom; m:Spanish broom	93;j644;m470
S. junceum L.	j:Spanish broom	93;j644;m470
Trifolium Linnaeus	**rjm**:clover	93;j646;m470
T. albopurpureum Torrey & A.Gray[84]		94;j649;m471
T. ciliolatum Bentham		94;j650;m472
T. depauperatum Desvaux[85]		94;j650;m472
T. fucatum Lindley[86]		94;j650;m472
T. gracilentum Torrey & A.Gray var. *g.*		94;j652;m473
T. incarnatum L.[87]	rj:crimson clover	94;j652;m--
T. microcephalum Pursh		94;j653;m473
T. obtusiflorum Hooker [**j**:*T. o.* Hooker & Arnott; **k**:*T. o.* Hooker f.]		94;j653;m475
T. repens L. [**k**:*T. r.* L. var. *r.*]	**rm**:white clover	94;j653;m475
T. tridentatum Lindley [**j**:*T. willdenovii* Sprengel]	r:tomcat clover	94;j654;m475
T. variegatum[88] Torrey & A.Gray [**jk**:*T. v.* Nuttall; **m**:*T. v.* Nuttall *in* Torrey & A.Gray]		94;j653;m476
Vicia Linnaeus	**rjm**:vetch	94;j654;m476
V. dasycarpa Tenore [**jk**:*V. villosa* Roth ssp. *varia* (Host) Corbière]	j:winter vetch, hairy vetch	95;j657;m477
V. exigua Nuttall[89] var. *hassei* (S.Watson) Jepson [**jk**:*V. hassei* S.Watson]		95;j656;m477
V. sativa L.[90]	**rm**:spring vetch	95;j657;m478
V. villosa Roth ssp. *v.*	**rjm**:winter vetch; j:hairy vetch	95;j657;m478

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[81] Based on j, *Melilotus officinalis* (L.) Pallas 'yellow sweetclover' should be looked for here as well. Note however, that **k** treats *M. albus* Medikus as a synonym of *M. officinalis* (L.) Lamarck.

[82] Our species are transferred to two genera in j: *Hoita* Rydberg and *Rupertia* J.Grimes.

[83] Common name in j applied to entire genus.

[84] Variety not specified in r. Based on j, ours is probably the nominate variety.

[85] Variety not specified in r. Based on j, ours is probably var. *truncatum* (E.Greene) Isley [**k**: *T. d.* Desvaux var. *stenophyllum* (Nuttall) McDermott].

[86] Nominate var. and var. *gambelii* (Nuttall) Jepson possible for our area according to **m**.

[87] Not included in **m**. See Munz and Keck 1959 p. 837.

[88] Nominate var. and var. *aciculare* (Nuttall) McDermott possible in our area according to **m**

[89] Slightly different in **m**, which adds '*in* Torrey & A.Gray' here.

[90] Subspecies not specified in r. Ours may be either nominate ssp. or ssp. *nigra* (L.) Erhart.

scientific name(s)	common name(s)	reference pages
Fagaceae Dumortier	j:oak family; **mf**:beech family	95;j657;m478;f436
Quercus Linnaeus	**rjmf**:oak; f:chêne	95;j658;m479;f445
Q. agrifolia Née var. *a.*	**rj**:coast live oak; j:encina	95;j661;m479;f452
Q. dumosa Nuttall (misapplied) [j:*Q. berberidifolia* Liebmann][91]	**rjm**:scrub oak; f:California scrub oak	95;j661;m480;f491
Q. lobata Née	**rjmf**:valley oak; **jm**:roble	96;j662;m481;f489
Q. wislizeni[92] A.DC. var. *frutescens* Engelmann	**rjf**:interior live oak; f:Sierra live oak	96:j662;m483;f452
Frankeniaceae A.Desvaux	**jm**:frankenia family	96;j664;m484
Frankenia Linnaeus	j:frankenia	96;j664;m484
F. grandifolia Chamisso & Schlechtendal[93] var. *g.* [**jk**:*F. salina* (Molina) I.M.Johnston]		96;j664;m484
Garryaceae Lindley	j:silk tassel family; **m**:silk-tassel family	96;j664;m484
Garrya Douglas [**k**:*G.* Douglas *ex* Lindley]	r:silktassel; **jm**:silk tassel bush	96;j664;m484
G. veatchii Kellogg		96;j666;m485
Gentianaceae Jussieu	**jm**:gentian family	96;j666;m485
Centaurium Hill	j:centaury	96;j667;m486
C. venustum (A.Gray) B.L.Robinson [**k**:*C. v.* (A.Gray) B.L.Robinson ssp. *v.*]	**rjm**:canchalagua	96;j667;m486
Geraniaceae Jussieu	**rjm**:geranium family	97;j672;m489
Erodium L'Héritier [**k**:*E.* L'Héritier *ex* Aiton]	**rjm**:storksbill, filaree	97;j672;m490
E. botrys (Cavanilles) Bertoloni		97;j672;m490
E. brachycarpum (Godron) Thellung [**m**:*E. obtusiplicatum* (Maire, Weiller & Wilcz) J.T.Howell]		97;j672;m491
E. cicutarium (L.) L'Héritier [**k**:*E. c.* (L.) L'Héritier ssp. *c.*]		97;j672;m490
E. macrophyllum Hooker & Arnott [**k**:*L. m.* Hooker & Arnott var. *m.*]		97;j672;m491
E. moschatum (L.) L'Héritier [**k**:*E. m.* (L.) L'Héritier var. *m.*]		97;j673;m491
Geranium Linnaeus	**rjm**:cranesbill; j:geranium	97;j673;m491
G. carolinianum L. [**k**:*G. c.* L. var. *c.*]		97;j673;m492
G. molle L.		97;j673;m492
G. rotundifolium L.	r:round-leaved cranesbill	97;j--;m--
Hydrophyllaceae R.Brown	**rjm**:waterleaf family	97;j683;m495
Emmenanthe Bentham		98;j683;m496
E. penduliflora Bentham	**rjm**:whispering bells	98;j683;m496

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[91] Not included in **k**.

[92] ICBN Recommendation 60C changes 'ii' to 'i' endings for epithets based on classical names, e.g. *wislizenii* to *wislizeni*, based on Wislizenus, not Wislizenius (see *The Jepson Globe* vol. 7 no. 2 1996).

[93] Author given only as 'Schlechtendal' in **mr**.

scientific name(s)	common name(s)	reference pages
Hydrophyllaceae (cont.)		
Eriodictyon Bentham	**rjm**:yerba santa	98;j684;m497
E. crassifolium Bentham var. *c.*		98;j684;m497
Eucrypta Nuttall		98;j686;m498
E. chrysanthemifolia (Bentham) E.Greene var. *c.*		98;j686;m498
Nama Linnaeus	**j**:purple mat	98;j687;m499
N. stenocarpum A.Gray		98;j688;m501
Nemophila Nuttall *ex* Barton		98;j690;m501
N. menziesii Hooker & Arnott ssp. *australis*[94] Brand [**j**:*N. m.* Hooker & Arnott var. ?]	**rjm**:baby blue-eyes	98;j690;m501
N. pedunculata Douglas *ex* Bentham [**j**:*N. p.* Bentham]		98;j691;m502
Phacelia A.L.Jussieu[95]		99;j691;m502
P. brachyloba (Bentham) A.Gray		99;j697;m506
P. cicutaria E.Greene var. *hispida* (A.Gray) J.T.Howell		99;j697;m506
P. distans Bentham	**m**:wild-heliotrope	99;j698;m509
P. douglasii (Bentham) Torrey [**k**:*P. d.* (Bentham) Torrey var. *d.*]		99;j698;m509
P. egena[96] (E.Greene *ex* Brand) J.T.Howell [**j**:*P. e.* (Brand) J.T.Howell; **m**:*P. e.* (E.Greene *ex* Brand) Constance; **k**:*P. e.* (E.Greene *ex* Brand) E.Greene *ex* J.T.Howell]		99;j698;m509
P. grandiflora (Bentham) A.Gray		99;j700;m510
P. imbricata E.Greene ssp. *i.*		100;j701;m511
P. longipes Torrey *ex* A.Gray [**j**:P. l. A.Gray]		100;j701;m511
P. minor (Harvey) Thellung *ex* F.Zimmerman [**jm**:*P. m.* (Harvey) Thellung]	**m**:wild Canterbury-bell	100;j702;m512
P. parryi Torrey		100;j704;m514
P. ramosissima Douglas *ex* Lehmann var. *austrolitoralis* Munz [**j**:*P. r.* Lehmann var. *a.* Munz; **k**:*P. r.* Douglas *ex* Lehmann var. *subglabra* M.E.Peck]		100;j705;m516
P. ramosissima Douglas *ex* Lehmann var. *suffrutescens* Parry [**jk**:*P. r.* Lehmann var. *latifolia* (Torrey) Cronquist]		100;j705;m516
P. tanacetifolia Bentham		100;j705;m516
P. viscida (Bentham *ex* Lindley) Torrey [**jm**:*P. v.* (Bentham) Torrey]		100;j706;m517
Pholistoma Lilja *ex* Lindblom [**k**:*P.* Lilja]		100;j706;m517
P. auritum (Lindley) Lilja *ex* Lindblom var. *a.* [**jmk**:*P. a.* (Lindley) Lilja var. *a.*]	**rj**:fiesta flower	100;j706;m517
P. racemosum (Nuttall *ex* A.Gray) Constance [**jm**:*P. r.* (Nuttall) Constance]		100;j706;m518

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[94] Subspecies not indicated in **jmk**. Distribution in **j** suggests ours could be either nominate variety or var. *integrifolia* Parish.

[95] Antoine Laurent de Jussieu (nephew of Bernard), not Adrien Henri Laurent de Jussieu (son of Antoine).

[96] Given erroneously as *P. elegans* in **r**.

scientific name(s)	common name(s)	reference pages
Juglandaceae A.Richard *ex* Kunth[97]	**jmf**:walnut family	100;j709;m521;f416
Juglans Linnaeus	**rjmf**:walnut; **f**:nogal	100;j709;m521;f425
J. californica S.Watson var. *c.* [**k**:*J. c.* S.Watson]	**j**:southern California black walnut; **f**:so. Cal. walnut, Cal. black walnut	100;j709;m521;f428
Lamiaceae Martinov	**rjm**:mint family	101;j710;m522
Lamium Linnaeus	**rm**:henbit; **j**:dead nettle	101;j714;m525
L. amplexicaule L.		101;j714;m525
Lepechinia Willdenow	**rjm**:pitcher sage	101;j714;m526
L. fragrans (E.Greene) Epling	**j**:fragrant pitcher sage	101;j715;m526
Marrubium Linnaeus	**rjm**:horehound	101;j715;m527
M. vulgare L.		101;j715;m527
Mentha Linnaeus	**rjm**:mint	101;j716;m528
M. arvensis L. ssp. *haplocalyx*[98] Briquet [**jk**:*M. a.* L.]	**r**:mint	101;j716;m528
M. pulegium L.	**rm**:pennyroyal	101;j716;m528
M. spicata L. var. *s.*[99]	**rjm**:spearmint	102;j716;m528
Monardella Bentham		102;j718;m529
M. hypoleuca A.Gray ssp. *h.*		102;j720;m530
M. lanceolata A.Gray [**k**:*M. l.* A.Gray var. *l.*]	**j**:mustang mint	102;j720;m530
Salvia Linnaeus	**rm**:sage	102;j725;m533
S. apiana Jepson [**k**:*S. a.* Jepson var. *a.*]	**rjm**:white sage	102;j726;m536
S. columbariae Bentham [**mk**:*S. c.* Bentham var. *c.*]	**rjm**:chia	102;j728;m536
S. leucophylla E.Greene	**j**:purple sage	102;j728;m538
S. mellifera E.Greene	**rjm**:black sage	102;j728;m538
S. spathacea E.Greene	**rjm**:pitcher sage	102;j728;m539
Satureja Linnaeus		102;j729;m539
S. douglasii (Bentham) Briquet	**rjm**:yerba buena	102;j729;m539
Scutellaria Linnaeus	**jm**:skullcap	103;j729;m540
S. tuberosa Bentham ssp. *t.* [**jmk**:*S. t.* Bentham]	**r**:skullcap	103;j730;m540
Stachys Linnaeus	**rjm**:hedge-nettle	103;j730;m540
S. albens A.Gray		103;j731;m541
S. bullata Bentham		103;j731;m541
S. rigida Nuttall *ex* Bentham ssp. *quercetorum* (A.A.Heller) Epling [**j**:*S. ajugoides* Bentham var. *r.* Jepson & Hoover; **k**:*S. palustris* L. ssp. *pilosa* (Nuttall) Epling]		103;j731;m541
Trichostema Linnaeus	**jm**:bluecurls	103;j732;m543
T. lanatum Bentham	**r**:wooly blue-curls; **j**:woolly bluecurls; **m**:woolly blue-curls, romero	103;j732;m544
T. lanceolatum Bentham	**rjm**:vinegar weed	103;j732;m544

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[97] Mabberley (1997) gives author as DC. *ex* Perleb.

[98] Subspecies not indicated in **jmk**. Nominate variety and var. *villosa* (Bentham) S.R.Stewart given only in **m**.

[99] According to **r**, plants in the SMM approach *Mentha* $^{\times}$ *piperita* L. (*pro sp.*), or peppermint, in leaf characteristics.

scientific name(s)	common name(s)	reference pages
Lauraceae Jussieu	**rjmf**:laurel family	103;j734;m544;f26
Umbellularia Nuttall [**kf**:*U.* (Nees) Nuttall	**rjf**:California bay; **jf**:California laurel, pepperwood; **m**:California-bay, California-laurel; **f**:Oregon-myrtle, myrtle-wood	103;j734;m544;f31
U. californica (Hooker & Arnott) Nuttall var. *c.*		103;j734;m544
Lennoaceae Solms-Laubach	**j**:lennoa family	104;j734;m545
Pholisma Nuttall *ex* Hooker		104;j734;m545
P. arenarium[100] Nuttall *ex* Hooker [**j**:*P. a.* Hooker]		104;j734;m545
Linaceae DeCandolle *ex* Perleb	**rjm**:flax family	104;j738;m547
Hesperolinon Small [**k**:*H.* (A.Gray) Small]	**j**:dwarf flax	104;j738;m548
H. micranthum (A.Gray) Small		104;j739;m548
Loasaceae Jussieu *ex* DeCandolle	**j**:loasa family; **m**:stick-leaf family	104;j740;m549
Mentzelia Linnaeus	**jm**:blazing star	104;j741;m550
M. micrantha (Hooker & Arnott) Torrey & A.Gray		104;j744;m554
Lythraceae J.Saint-Hilaire	**rjm**:loosestrife family	104;j745;m560
Ammannia Linnaeus		104;j745;m560
A. coccinea Rottboel		104;j745;m560
Lythrum Linnaeus	**r**:loosestrife	104;j746;m560
L. californicum Torrey & A.Gray	**j**:California loosestrife	104;j746;m561
L. hyssopifolia [**j**:*L. hyssopifolium* L.]		104;j746;m561
Malvaceae Jussieu	**rjm**:mallow family	104;j746;m561
Lavatera Linnaeus	**rjm**:tree-mallow; **j**:malva rosa	105;j751;m564
L. assurgentiflora Kellogg [**k**:*L. a.* Kellogg ssp. *a.*]	**rjm**:malva rosa; **j**:island mallow	105;j751;m564
Malacothamnus E.Greene	**j**:bush mallow	105;j751;m566
M. fasciculatus[101] (Nuttall *ex* Torrey & A.Gray) E.Greene [**j**:*M. f.* (Torrey & A.Gray) E.Greene; **m**:*M. f.* (Nuttall) E.Greene]	**j**:chaparral mallow	105;j752;m567
Malva Linnaeus	**rj**:mallow; **m**:cheeses	105;j754;m568
M. nicaeensis Allioni	**j**:bull mallow	105;j754;m569
M. parviflora L.	**rjm**:cheeseweed; **j**:little mallow	105;j754;m569
Malvella Jaubert & Spach	**j**:alkali-mallow	105;j754;m--
M. leprosa (Ortega) Krapovickas [**m**:*Sida leprosa* (Ortega) K.Schumann var. *hederacea* K.Schumann]	**r**:alkali mallow; **jm**:alkali-mallow	105;j754;m569
Modiola Moench		105;j754;m569
M. caroliniana (L.) G.Don		105;j754;m569

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[100] According to **r**, coastal forms differ from desert forms and have been named *Pholisma paniculatum* Templeton.

[101] According to j, "Highly variable with many indistinct and intergrading local forms" which are not distinguished in **rj**. Among those potentially present in SMM as described in **m** are var. *catalinensis* (Eastwood) Kearney, var. *laxiflorus* (A Gray) Kearney, and var. *nuttallii* (Abrams) Kearney.

scientific name(s)	common name(s)	reference pages
Malvaceae (cont.)		
Sidalcea A.Gray	**j**:checker mallow, checkerbloom; **m**:checker	105;j755;m570
S. malviflora[102] (DC.) A.Gray *ex* Bentham ssp. *m.*[103] [**j**:*S. m.* (DC.) Bentham ssp. *m.*]	**j**:checker mallow[104]	105;j759;m570
S. malviflora (DC.) A.Gray *ex* Bentham ssp. *sparsifolia*[105] C.L.Hitchcock [**j**:*S. m.* (DC.) Bentham ssp. *s.* C.L.Hitchcock]	**j**:checker mallow	105;j759;m570
Martyniaceae Horaninow[106]	**rj**:unicorn-plant family; **m**:martynia family	106;j762;m574
Proboscidea Keller *in* Schmidel [**k**:*P.* Schmidel]	**j**:unicornplant, devil's claw; **m**:unicorn-plant	106;j762;m574
P. louisianica (P.Miller) Thellung [**k**:*P. l.* (P.Miller) Thellung ssp. *l.*][107]	**j**:common unicornplant	106;j762;m--
Myricaceae Blume[108]	**j**:waxmyrtle family; **mf**:wax-myrtle family	106;j765;m576;f429
Myrica Linnaeus	**f**:wax-myrtle, bayberry, sweet gale, myrique	106;j766;m576;f430
M. californica Chamisso [**m**:*M. c.* Chamisso & Schlechtendal][109]	**r**:California wax myrtle; **j**:waxmyrtle; **m**:wax-myrtle; Cal. wax-myrtle, Pacific bayberry	106;j766;m577;f432
Myrtaceae Jussieu	**rjm**:myrtle family	106;j766;m577
Eucalyptus L'Héritier	**rjm**:gum tree	106;j766;m577
E. globulus Labillardière [**k**:*E. g.* Labillardière ssp. *g.*]	**rjm**:blue gum	106;j768;m577
Nyctaginaceae Jussieu	**rjm**:four-o'clock family	106;j768;m577
Abronia A.L.Jussieu	**rm**:sand-verbena; **j**:sand verbena	106;j769;m578
A. maritima Nuttall *ex* S.Watson [**j**:*A. m.* S.Watson]		106;j769;m579
A. umbellata Lamarck ssp. *u.*		106;j770;m579
Mirabilis Linnaeus	**rj**:four o'clock; **m**:four-o'clock	106;j771;m583
M. californica A.Gray var. *c.* [**j**:*M. c.* A.Gray]	**jm**:wishbone bush	106;j772;m584

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[102] Spelling changed from *malvaeflora* to *malviflora*: ICBN Recommendation No.60G (see *The Jepson Globe* vol. 8 no. 1 1997).

[103] According to **r**, subspecies "occurred, at least formerly" in the SMM.

[104] Common name applied to all subspecies.

[105] According to **r**, "our material is referrable to var. *stellata* C.L.Hitchcock." Based on **j**, ssp. *californica* (Torrey & A.Gray) C.L.Hitchcock could occur here.

[106] Mabberley (1997) and **k** place this family within Pedaliaceae R.Brown.

[107] Not included in **m**. See Munz and Keck 1959 p. 680.

[108] Mabberley (1997) gives the author as Martinov.

[109] Authority in **j** given as Chamisso & Schlechtendal is corrected to Chamisso (see *The Jepson Globe* vol. 8 no. 1 1997).

scientific name(s)	common name(s)	reference pages
Nymphaeaceae Salisbury	rf:water-lily family; j:waterlily family	107;j774;m--;f66
Nuphar J.E.Smith [**f**:*N.* Smith *in* J.Sibthorp & J.E.Smith]	j:cow-lily, yellow pond-lily	107;j774;m--;f67
N. luteum (L.) Sibthorp & J.E.Smith ssp. *polysepalum* (Engelmann) E.O.Beal [**k**:*N. lutea* (L.) J.E.Smith ssp. *polysepala* (Engelmann) E.O.Beal; **f**:*N. polysepala* Engelmann][110]		107;j774;m--;f71
Oleaceae Hoffmannsegg & Link	**rjm**:olive family	107;j775;m586
Fraxinus Linnaeus	**rjm**:ash	107;j775;m586
F. dipetala Hooker & Arnott	j:California ash; **m**:flowering ash	107;j775;m588
F. velutina Torrey var. *coriacea* (S.Watson) Rehder [**jk**:*F. v.* Torrey]	j:velvet ash	107;j776;m588
Onagraceae Jussieu	rm:evening-primrose family; j:evening primrose family	107;j776;m589
Boisduvalia Spach[111]		107;j--;m590
B. glabella[112] (Nuttall) Walpers [**j**:*Epilobium pygmaeum* (Spegazzini) P.Hoch & Raven]		107;j797;m590
Camissonia Link	j:sun cup	107;j778;m590
C. bistorta (Nuttall *ex* Torrey & A.Gray) Raven [**j**:*C. b.* (Torrey & A.Gray) Raven]	j:California sun cup	108;j780;m590
C. boothii (Douglas *ex* Lehmann) Raven ssp. *decorticans* (Hooker & Arnott) Raven [**j**:*C. b.* (Douglas) Raven ssp. *d.* (Hooker & Arnott) Raven]		108;j781;m590
C. californica (Nuttall *ex* Torrey & A.Gray) Raven [**j**:*C. c.* (Torrey & A.Gray) Raven]		108;j781;m590
C. cheiranthifolia (Hornemann *ex* Sprengel) Raimann ssp. *suffruticosa* (S.Watson) Raven [**j**:*C. c.* (Sprengel) Raimann ssp. *s.* (S.Watson) Raven; **m**:*C. c.* (Hornemann *ex* Sprengel) Raimann *in* Engler & Prantl ssp. *s.* (S.Watson) Raven]	j:beach evening primrose	108;j782;m595
C. hirtella (E.Greene) Raven		108;j783;m597
C. ignota (Jepson) Raven		108;j783;m597
C. intermedia Raven		108;j783;m598
C. lewisii Raven	j:Lewis' evening primrose	108;j783;m598
C. micrantha (Hornemann *ex* Sprengel) Raven [**j**:*C. m.* (Sprengel) Raven]		109;j783;m598
C. strigulosa (Fischer & C.A.Meyer) Raven		109;j786;m599
Clarkia Pursh		109;j786;m600
C. bottae (Spach) HarlanF.Lewis & M.E.Lewis [**m**:*C. deflexa* (Jepson) HarlanF.Lewis & M.E.Lewis]	j:punchbowl godetia	109;j789;m601
C. cylindrica (Jepson) HarlanF.Lewis & M.E.Lewis ssp. *c.*		109;j789;m601

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[110] Not included in **m** See Munz and Keck 1959 p. 113.

[111] Our species treated in the genus *Epilobium* in j

[112] Extinct from range, according to **r**

scientific name(s)	common name(s)	reference pages
Onagraceae *Clarkia* (cont.)		
C. epilobioides (Nuttall) A.Nelson & J.F.Macbride [**k**:*C. e.* (Nuttall *ex* Torrey & A.Gray) A.Nelson & J.F.Macbride]		109;j790;m603
C. purpurea (W.Curtis) A.Nelson & J.F.Macbride ssp. *quadrivulnera* (Douglas) HarlanF.Lewis & M.E.Lewis [**k**:C. p. (W.Curtis) A.Nelson & J.F.Macbride ssp. *q.* (Douglas *ex* Lindley) HarlanF.Lewis & M.E.Lewis]	j:four-spot	109;j792;m603
C. unguiculata Lindley		109;j793;m604
Epilobium Linnaeus	j:fireweed, willow herb; **m**:willow-herb	109;j793;m604
E. brachycarpum C.Presl [**m**:*E. paniculatum* Nuttall *ex* Torrey & A.Gray; **k**:*E. b.* K.Presl]		110;j796;m607
E. canum (E.Greene) Raven ssp. *angustifolium*[113] (Keck) Raven [j:*E. canum* (E.Greene) Raven ssp. *c.*; **m**:*Zauschneria californica* K.Presl ssp. *c.*]	j:California fuchsia, zauschneria	109;j796;m616
E. canum (E.Greene) Raven ssp. *c.* [**m**:*Zauschneria cana* E.Greene]	rj:California fuchsia, zauschneria	109;j796;m616
E. ciliatum Rafinesque ssp. *c.*		110;j796;m606
Ludwigia Linnaeus	j:false loosestrife, water primrose	110;j800;m612
L. peploides (HBK.) Raven ssp. *p.* [j:*L. p.* (Kunth) Raven; **k**:*L. p.* (Kunth) Raven ssp. *p.*]		110;j800;m612
Oenothera Linnaeus	r**m**:evening-primrose; j:evening primrose	110;j800;m612
O. californica (S.Watson) S.Watson ssp. *c.* [**k**:*O. c.* (S.Watson) S.Watson]		110;j803;m614
O. elata HBK. ssp. *hirsutissima* (A.Gray *ex* S.Watson) Dietrich [j:*O. e.* Kunth ssp. *h.* (S.Watson) W.Dietrich; **m**:*O. hookeri* Torrey & A.Gray ssp. *grisea* (Bartlett) Munz; **k**:*O. e.* Kunth ssp. *hirsutissima* (A.Gray *ex* S.Watson) W.Dietrich][114]		110;j803;m614
Oxalidaceae R.Brown	rj**m**:oxalis family; **m**:wood-sorrel family	110;j808;m620
Oxalis Linnaeus	**m**:wood-sorrel	110;j808;m620
O. albicans Kunth ssp. *californica* (Abrams) Eiten		110;j809;m620
O. corniculata L.		110;j809;m620
O. pes-caprae L.	j:Bermuda buttercup; **m**:Bermuda-buttercup	110;j809;m620
O. rubra[115] Saint-Hilaire [**k**:*O. articulata* Savigny ssp. *r.* (Saint-Hilaire) Lourteig]		110;j809;m--
Paeoniaceae Rafinesque	rj**m**:peony family	111;j809;m622
Paeonia Linnaeus	rj**m**:peony	111;j810;m622
P. californica Nuttall *ex* Torrey & A.Gray [j:*P. c.* Torrey & A.Gray; **k**:*P. c.* Nuttall]		111;j810;m622

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[113] Subspecies reduced to synonymy with the nominate subspecies in j.

[114] Synonym *O. hookeri* Torrey & A.Gray ssp. (and var.) *h.* (A.Gray *ex* S.Watson) Munz is also included in **k**

[115] Not reported outside North Coastal and San Francisco Bay regions in j See also Munz and Keck 1959 p. 149.

scientific name(s)	common name(s)	reference pages
Papaveraceae Jussieu	**rjmf**:poppy family	111;j810;m622;f300
Dendromecon Bentham	**r**:tree-poppy; **jm**:tree poppy	111;j811;m625;f306
D. rigida Bentham ssp. *r.* [**jf**:*D. r.* Bentham]	**jf**:bush poppy	111;j811;m625;f307
Dicentra Bernhardi[116]	**r**:bleeding heart; **f**:bleeding-heart, dicentre	111;j812;m625;f341
D. ochroleuca Engelmann	**f**:white eardrops	111;j812;m626;f342
Eschscholzia Chamisso [**mf**:*E.* Chamisso *in* Nees]	**r**:California-poppy; **m**:California poppy	111;j812;m626;f308
E. caespitosa Bentham [**m**:*E. c.* Bentham ssp. *c.*]		111;j814;m626;f308
E. californica Chamisso [**kf**:*E. c.* Chamisso ssp. *c.*]	**j**:California poppy; **f**:California-poppy	111;j814;m627;f310
Meconella Nuttall [**mf**:*M.* Nuttall *in* Torrey & A.Gray]		111;j815;m628;f337
M. denticulata E.Greene		111;j815;m629;f337
Papaver Linnaeus	**rmf**:poppy; **f**:pavot	112;j815;m629;f323
P. californicum A.Gray	**j**:fire poppy; **f**:western poppy	112;j815;m629;f326
Platystemon Bentham	**rm**:cream cups; **f**:cream-cups	112;j815;m629;f338
P. californicus Bentham [**m**:*P. c.* Bentham var. *c.*]	**j**:cream cups	112;j815;m631;f339
Romneya Harvey	**rjm**:Matilija poppy; **f**:Matilija-poppy	112;j816;m631;f334
R. coulteri Harvey	**j**:Coulter's Matilija poppy	112;j816;m631;f335
Stylomecon G.C.Taylor	**f**:wind-poppy	112;j816;m632;f336
S. heterophylla (Bentham) G.C.Taylor	**j**:wind poppy	112;j816;m632;f336
Plantaginaceae Jussieu	**rjm**:plantain family	112;j820;m633
Plantago Linnaeus	**jm**:plantain	112;j820;m633
P. erecta E.Morris [**m**:*P. e.* E.Morris ssp. *e.*]	**r**:California plantain	112;j820;m634
P. lanceolata L.	**rjm**:English plantain; **r**:ribwort; **m**:ribgrass	112;j821;m635
P. major L. [**k**:*P. m.* L. var. *m.*]	**rjm**:common plantain	112;j821;m635
Platanaceae T.Lestiboudois *ex* Dumortier	**j**:plane tree family; **f**:plane-tree family; **rjm**sycamore family	112;j821;m636;f358
Platanus Linnaeus	**rmf**:sycamore; **r**:plane tree; **m**:plane-tree; **f**:sycomore, plane, platane	112;j822;m636;f359
P. racemosa Nuttall	**j**:western sycamore; **f**:California sycamore	112;j822;m636;f360
Plumbaginaceae Jussieu	**rjm**:leadwort family	113;j822;m636
Limonium P.Miller	**rjm**:sea-lavender, marsh-rosemary	113;j822;m637
L. californicum (Boissier) A.A.Heller	**j**:western marsh-rosemary	113;j822;m637
L. perezii F.T.Hubbard [**jk**:*L. p.* (Stapf) F.T.Hubbard]		113;j822;m637

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[116] Included in the fumitory family Fumariaceae L. in **kf**

scientific name(s)	common name(s)	reference pages
Polemoniaceae Jussieu	rm:phlox family	113;j824;m637
Allophyllum (Nuttall) A. & V.Grant		113;j824;m639
A. glutinosum (Bentham) A. & V.Grant		113;j824;m639
Eriastrum Wooton & Standley		113;j826;m641
E. densifolium (Bentham) H.Mason ssp. *elongatum*[117] (Bentham) H.Mason		113;j828;m643
E. filifolium (Nuttall) Wooton & Standley		113;j828;m643
E. sapphirinum (Eastwood) H.Mason ssp. *dasyanthum* (Brand) H.Mason [**j**:*E. s.* (Eastwood) H.Mason]		113;j828;m643
Gilia RuízLópez & Pavón	m:gilia	114;j828;m644
G. angelensis V.Grant		114;j831;m647
G. australis[118] (H.Mason & A.D.Grant) V.Grant; [**k**:*G. a.* (H.Mason & A.D.Grant) V. & A.D.Grant]		114;j831;m647
G. capitata Sims ssp. *abrotanifolia* (Nuttall *ex* E.Greene) V.Grant [**j**:*G. c.* Sims ssp. *a.* (E.Greene) V.Grant]		114;j832;m648
Leptodactylon Hooker & Arnott		114;j840;m657
L. californicum Hooker & Arnott ssp. *c.*[119] [**j**:L. c. Hooker & Arnott]	rm:prickly-phlox; j:prickly phlox	114;j840;m657
Linanthus Bentham		114;j840;m658
L. androsaceus (Bentham) E.Greene ssp. *micranthus*[120] (Steudel) H.Mason [**j**:*L. parviflorus* (Bentham) E.Greene; **k**:*L. a.* (Bentham) E.Greene ssp. *m.* (Steudel *ex* Bentham) H.Mason]		114;j843;m659
L. dianthiflorus (Bentham) E.Greene ssp. *d.* [**j**:*L. d.* (Bentham) E.Greene]	rm:ground-pink	114;j842;m661
L. liniflorus (Bentham) E.Greene ssp. *pharnaceoides* (Bentham) H.Mason [**j**:*L. l.* (Bentham) E.Greene]		114;j843;m662
Microsteris E.Greene[121]		114;j849;m663
M. gracilis (Douglas *ex* Hooker) E.Greene ssp. *g.* [**m**:*M. g.* (Hooker) E.Greene ssp. *g.*; **jk**:*Phlox g.* (Hooker) E.Greene ssp. *g.*][122]		114;j850;m663
Navarretia RuízLópez & Pavón		114;j844;m664
N. hamata[123] E.Greene [**k**:*N. h.* E.Greene ssp. *h.*]		114;j847;m664
N. pubescens (Bentham) Hooker & Arnott		114;j849;m666

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[117] Subspecies inadvertently omitted from **m**. See Munz and Keck 1959 p. 495.

[118] Geoff Burleigh's report of *Gilia australis* on the slopes of Ladyface in 1978 is believed by Timothy Thomas (pers. comm. Jan. 1997) to actually be *Gilia splendens* Lindley on the basis of unverified specimens he collected at nearby Cheseboro Canyon on April 9, 1990 (*Thomas 1357*). The subspecies, whether nominate, or ssp. *grantii* (Brand) V.Grant & A.D.Grant was unspecified.

[119] Gordon-Reedy (1990) discusses occurrence of ssp. *glandulosum* (Eastwood) Mason *in* Abrams as "once common in the Los Angeles Basin and eastern Santa Monica Mountains, but now restricted largely to foothills and western slope of the San Gabriel Mountains."

[120] Our subspecies is treated as a synonym of *L. parviflorus* in **j**. *L. androsaceus* still exists, but does not occur in our area, according to the distribution given in **j**.

[121] Treated as *Phlox* L., Sect. *Microsteris* in **j**.

[122] Authority in **j** corrected (see *The Jepson Globe* vol. 8 no. 2 1997). Subspecies indicated in **k**, but not in **j**.

[123] Subspecies not specified in **r**. Ours plants are reportedly non-glandular, as is characteristic of ssp. *parviloba* A.G.Day, which however, is not reported in our area in **j**. Both nominate ssp. and ssp. *leptantha* (E.Greene) H.Mason could be expected here based on distribution given in **j**.

scientific name(s)	common name(s)	reference pages
Polygalaceae Hoffmannsegg & Link	**rjm**:milkwort family	115;j852;m669
Polygala Linnaeus	**jm**:milkwort	115;j853;m669
P. cornuta Kellogg var. *fishiae* (C.Parry) Jepson [**m**:*P. c.* Kellogg ssp. *f.* (C.Parry) Munz]	**j**:Fish's milkwort	115;j853;m669
Polygonaceae Jussieu	**rjm**:buckwheat family	115;j854;m670
Chorizanthe R.Brown *ex* Bentham	**j**:spineflower	115;j856;m670
C. staticoides Bentham [**m**:*C. s.* Bentham ssp. *s.*]	**rjm**:Turkish rugging	115;j859;m674
C. wheeleri S.Watson	**j**:Wheeler's spineflower	115;j860;m676
Eriogonum Michaux	**rjm**:wild buckwheat	115;j860;m677
E. cinereum Bentham		116;j869;m683
E. citharaeforme S.Watson [**j**:*E. cithariforme* S.Watson; **k**:*E. cithariforme* S.Watson var. *c.*]		116;j869;m683
E. crocatum A.Davidson	**rj**:Conejo buckwheat	116;j870;m683
E. elongatum Bentham var. *e.* [**k**:*E. e.* Bentham]		116;j870;m684
E. fasciculatum Bentham ssp. *f.* [**jk**:*E. f.* Bentham var. *f.*]	**rjm**:California buckwheat	116;j872;m684
E. fasciculatum Bentham ssp. *foliolosum* (Nuttall) S.Stokes [**j**:*E. f.* Bentham var. *foliolosum* (Nuttall) Abrams; **k**:*E.* f. var. *foliolosum* (Nuttall) S.Stokes *ex* Abrams]	**r**:California buckwheat	116;j872;m685
E. gracile Bentham var. *g.*		116;j872;m686
E. parvifolium J.E.Smith [**m**:*E. p.* J.E.Smith *in* Rees]		116;j878;m693
E. wrightii Torrey *ex* Bentham ssp. *membranaceum* (S.Stokes) S.Stokes [**j**:*E. w.* Bentham var. *m.* Jepson; **m**:*E. w.* Torrey *ex* Bentham ssp. *m.* S.Stokes; **k**:*E. w.* Torrey *ex* Bentham var. *m.* S.Stokes *ex* Jepson]		116;j882;m697
Lastarriaea Remy[124]		116;j883;m--
L. coriacea (Goodman) Hoover [m:Chorizanthe c. Goodman]		116;j883;m672
Mucronea Bentham[125]		116;j883;m--
M. californica Bentham [**m**:*Chorizanthe c.* (Bentham) A Gray]	**j**:California spineflower	116;j884;m672
Persicaria P.Miller[126]		117;j--;m--
P. amphibia (L.) S.F.Gray var. *emersum*[127] (Michaux) Hickman [**jm**:*Polygonum amphibium* L. var. *emersum* Michaux]	**j**:water smartweed, kelp[128]	117;j888;m703
P. hydropiperoides Michaux [**j**:*Polygonum h.* Michaux; **m**:*Polygonum h.* Michaux var. *asperifolium* Stanford]	**j**:waterpepper	117;j890;m704
P. lapathifolia (L.) S.F.Gray [**jm**:*Polygonum lapathifolium* L.; **k**:*Polygonum l.* L. var. *l.*]	**r**:willow-weed	117;j890;m704
P. punctata (Elliot) Small [**jmk**:*Polygonum punctatum* Elliot]	**r**:water smartweed	117;j891;m704

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[124] Treated as *Chorizanthe* in **m**

[125] Treated as *Chorizanthe* in **m**

[126] Treated as *Polygonum* in **jm**.

[127] Synonym *Persicaria amphibia* (L.) S.F Gray var *emersa* (Michaux) Hickman also included in **k**.

[128] Water smartweed includes all varieties, 'kelp' applies to var. *emersum* only.

scientific name(s)	common name(s)	reference pages
Polygonaceae (cont.)		
Polygonum Linnaeus	**jm**:knotweed, smartweed	117;j886;m700
P. arenastrum Boreau [**k**:*P. a.* Jordan *ex* Boreau]	**r**:knotweed; **j**:common knotweed, doorweed	117;j888;m703
P. argyrocoleon Steudel *ex* Kunze [**j**:*P. a.* Kunze]		117;j888;m703
Pterostegia Fischer & C.A.Meyer		117;j892;m705
P. drymarioides Fischer & C.A.Meyer		117;j892;m705
Rumex Linnaeus	**jm**:dock; **m**:sorrel	117;j892;m705
R. acetosella L.[129]	**rjm**:sheep sorrel	118;j894;m706
R. conglomeratus J.Murray		118;j894;m706
R. crassus Rechinger f. [**jk**:*R. salicifolius* J.A.Weinmann var. *c.* (Rechinger f.) J.T.Howell]	**j**:willow dock[130]	118;j894;m706
R. crispus L.	**rjm**:curly dock	118;j894;m706
R. kerneri Borbás		118;j894;m707
R. maritimus L. var. *fueginus* (Philipi) Dusen [**jk**:*R. m.* L.; **m**:*R. f.* Philipi]	**j**:golden dock	118;j894;m707
R. salicifolius J.A.Weinmann var. *s.*[131]	**j**:willow dock	118;j894;m708
Portulacaeae Jussieu	**rjm**:purslane family	118;j895;m708
Calandrinia Kunth		118;j895;m708
C. breweri S.Watson		118;j896;m709
C. ciliata (RuízLópez & Pavón) DC. var. *menziesii* (Hooker) J.F.Macbride [**j**:*C. c.* RuízLópez & Pavón) DC.; **k**:*C. c.* (RuízLópez & Pavón) DC.]	**rjm**:red-maids	118;j896;m709
C. maritima Nuttall [**k**:*Cistanthe m.* (Nuttall) Hershkovitz]	**j**:seaside calandrinia	819;j896;m709
Calyptridium Nuttall [**m**:*C.* Nuttall *in* Torrey & A.Gray; [**k**:*Cistanthe* Spach]	**j**:pussypaws	119;j896;m709
C. monandrum Nuttall [**m**:*C. m.* Nuttall *in* Torrey & A.Gray; **k**:*Cistanthe m.* (Nuttall) Hershkovitz]		119;j896;m711
Claytonia Linnaeus		119;j898;m711
C. perfoliata[132] Donn [**j**:*C. p.* Willdenow; **m**:*C. p.* Donn. var. *p.*[133]; **k**:*C. p.* Donn *ex* Willdenow ssp. and vars.]	**r**:miner's lettuce; **m**:miner's-lettuce	119;j900;m712
Lewisia Pursh		119;j900;m713
L. rediviva Pursh var. *r.* [**j**:*L. r.* Pursh; **mk**:*L. r.* Pursh var. *minor*[134] (Rydberg) Munz]	**rm**:bitterroot; **j**:bitter root	119;j903;m714
Portulaca Linnaeus		119;j904;m715
P. oleracea L. [**k**:*P. o.* ssp. *o.*?]	**rm**:purslane; **j**:common purslane	119;j905;m715

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[129] *Rumex angiocarpus* Murbeck may also be in SMM according to **r**. This is a synonym in **k**.

[130] Common name applied to all varieties.

[131] Nominate variety inferred for our area based on distribution in **j**. Other varieties might be anticipated. Needs study.

[132] Confusing nomenclature with varieties included within subspecies in **k**. Subspecies not specified in **r**. Anticipate either or both nominate ssp. and ssp. *mexicana* (Rydberg) JohnM.Miller & Chambers based on distribution in **j** (latter not in **k**).

[133] *Claytonia perfoliata* Donn var. *parviflora* (Douglas *ex* Hooker) Torrey [**j**:*C. parviflora* Hooker ssp. *p.*; **k**:*C. parviflora* Douglas *ex* Hooker] included in **m** anticipated?

[134] Name applied to smaller plants of the Peninsular, Transverse, and Sierra Nevada ranges in **m**. Both vars. included in **k**.

scientific name(s)	common name(s)	reference pages
Primulaceae Batsch *ex* Borkhausen	rjm:primrose family	119;j905;m715
Anagallis Linneaus	rj:pimpernel	119;j905;m715
A. arvensis L.	j:poor-man's weatherglass; scarlet pimpernel; m:pimpernel	119;j905;m717
Dodecatheon Linneaus	rjm:shooting star	119;j906;m717
D. clevelandii E.Greene ssp. *c.*		119;j908;m718
D. clevelandii E.Greene ssp. *sanctarum* (E.Greene) Abrams		119;j908;m718
Samolus Linnaeus	jm:water-pimpernel; j:brookweed	119;j909;m719
S. valerandi L. ssp. *parviflorus* (Rafinesque) Hultén [jm:S. p. Rafinesque]		119;j909;m719
Ranunculaceae Jussieu	rj:buttercup family; mf:crowfoot family	120;j910;m719;f85
Clematis Linnaeus	rm:virgin's-bower; rf:clematis; f:clématite; j:virgin's bower	120;j914;m721;f158
C. lasiantha Nuttall [mf:*C. l.* Nuttall *in* Torrey & A.Gray]	j:pipestems; f:pipestem	120;j914;m722;f162
C. ligusticifolia Nuttall [mf:*C. l.* Nuttall *in* Torrey & A.Gray; k:*C. l.* Nuttall var. *l.*]	j:virgin's bower, yerba de chiva; f:virgin's-bower, old man's beard, hierba de chivo	120;j914m722;f163
Delphinium Linnaeus	rjf:larkspur; f:delphinium	120;j916;m722;f196
D. cardinale Hooker	rjmf:scarlet larkspur; j:cardinal larkspur	120;j918;m723;f207
D. parryi A.Gray ssp. *blochmaniae* (E.Greene) HarlanLewis & Epling	jf:dune or Blochman's larkspur	120;j920;m--;f213
D. parryi A.Gray ssp. *p.*	jf:Parry's larkspur	120;j920;m724;f212
D. patens Bentham ssp. *hepaticoideum* Ewan	j:spreading larkspur[135]	120;j920;m724;f239
Ranunculus Linnaeus	rjmf:buttercup; mf:crowfoot; f:renoncule	120;j923;m727;f88
R. californicus Bentham var. *c.* [jk:*R. c.* Bentham]	r:California buttercup	120;j925;m728;f100
R. cymbalaria Pursh ssp. *saximontanus* (Fernald) Thorne [jm:*R. c.* Pursh ssp. *s.* Fernald; k:*R. c.* Pursh var. *s.* Fernald; f:*R. c.* Pursh]	f:ranuncule cymbalaire	121;j926;m728;f126
R. hebecarpus Hooker & Arnott		121;j926;m729;f106
Thalictrum Linnaeus	r:meadow rue; jmf:meadow-rue	121;j928;m729;f258
T. polycarpum S.Watson [j:*T. fendleri* A.Gray var. *p.* Torrey; mf:*T. p.* (Torrey) S.Watson; k:*T. f.* Engelmann *ex* A.Gray var. *p.* Torrey]	f:tall western meadow-rue	121;j930;m730;f267
Resedaceae Berchtold & J.Presl	rjm:mignonette family	121;j930;m730
Oligomeris Cambessèdes		121;j931;m730
O. linifolia (M.Vahl) J.F.Macbride		121;j931;m730

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[135] Common name applied to all subspecies.

scientific name(s)	common name(s)	reference pages
Rhamnaceae Jussieu	**jm**:buckthorn family	121;j931;m731
Ceanothus Linnaeus	**rjm**:California-lilac	121;j932;m732
C. crassifolius Torrey	**j**:hoaryleaf ceanothus	121;j935;m733
C. cuneatus (Hooker) Nuttall var. *c.* [**k**:*C. c.* (Hooker) Nuttall ssp. *c.*]	**rm**:buck brush	122;j935;m733
C. leucodermis E.Greene	**j**:chaparral whitethorn	122;j936;m734
C. megacarpus Nuttall var. *m.* [**k**:*C. m.* Nuttall ssp. *m.*]	**r**:big-pod ceanothus **j**:bigpod ceanothus	122;j937;m735
C. oliganthus Nuttall[136] [**m**:*C. o.* Nuttall *in* Torrey & A.Gray]		122;j937;m735
C. spinosus Nuttall [**j**:*C. s.* Torrey & A.Gray; **m**:*C. s.* Nuttall *in* Torrey & A.Gray]	**rj**:greenbark ceanothus; **r**:red-heart	122;j938;m735
Rhamnus Linnaeus [**k**:*Rhamnus* L. and *Frangula* P.Miller]	**rjm**:buckthorn **rm**:cascara	122;j940;m738
R. californica Eschscholtz ssp. *c.* [**k**:*Frangula c.* ssp. *c.*]	**rj**:California coffeeberry	122;j940;m738
R. crocea Nuttall *ex* Torrey & A.Gray [**j**:*R. c.* Nuttall; **m**:*R. c.* Nuttall *in* Torrey & A.Gray; **k**:*R. c.* Nuttall ssp. *c.*]	**rm**:buckthorn; **j**:spiny redberry; **m**:redberry	122;j940;m739
R. ilicifolia Kellogg [**k**:*R. crocea* Nuttall ssp. *i.* (Kellogg) E.Greene]	**j**:holly-leaf redberry	122;j940;m739
Rosaceae Jussieu	**jm**:rose family	122;j942;m739
Adenostoma Hooker & Arnott		123;j946;m741
A. fasciculatum Hooker & Arnott [**k**:*A. f.* Hooker & Arnott var. *f.*]	**rjm**:chamise, **rm**:greasewood	123;j946;m741
A. sparsifolium Torrey	**rm**:red shank; **m**:ribbon bush	123;j946;m741
Alchemilla Linnaeus [**j**:*Aphanes* L.]		123;j948;m741
A. arvensis (L.) Scopoli [**j**:*Aphanes occidentalis* (Nuttall) Rydberg **m**:*Alchemilla o.* Nuttall; **k**:*Aphanes arvensis* L.]		123;j948;m742
Cercocarpus Kunth [**m**:*C.* HBK.]	**jm**:mountain-mahogany	123;j948;m742
C. betuloides Nuttall *ex* Torrey & A.Gray var. *b.* [**j**:*C. b.* Torrey & A.Gray var. *b.*; **k**:*C. montanus* Rafinesque var. *glaber* (S.Watson) F.L.Martin]	**j**:birch-leaf mountain-mahogany	123;j949;m743
C. betuloides Nuttall *ex* Torrey & A.Gray var. *blancheae* (C.K.Schneider) Little [**j**:*C. b.* Torrey & A.Gray var. *b.* (C.K.Schneider) Little; **k**:*C. montanus* Rafinesque var. *blanchae* (C.K.Schneider) F.L.Martin]	**j**:island mountain-mahogany	123;j949;m743
Chamaebatia Bentham		123;j949;m743
C. australis (Brandegee) Abrams[137]		123;j949;m743

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[136] Variety not specified in **r**. Variety *sorediatus* (Hooker & Arnott) C.Schmidt commonly observed by present author. Nominate var. anticipated based on **j** (both treated as subspecies in **k**).

[137] Not reported in our area in **jm**.

scientific name(s)	common name(s)	reference pages
Rosaceae (cont.)		
Heteromeles M.Roemer	j:Christmasberry; m:Christmas-berry; jm:toyon	123;j953;m747
H. arbutifolia (Aiton) M.Roemer [**j**:*H. a.* (Lindley) M.Roemer; **k**:*H. a.* (Lindley) M.Roemer var. *a.*]	r:toyon, California christmas berry	123;j953;m747
Holodiscus Maximowicz [**k**:*H.* (K.Koch) Maximowicz		124;j953;m747
H. discolor (Pursh) Maximowicz var. *franciscanus* (Rydberg) Jepson [**jk**:*H.* d. (Pursh) Maximowicz]	j:oceanspray	124;j953;m748
Horkelia Chamisso & Schlechtendal		124;j953;m748
H. cuneata Lindley ssp. *c.*		124;j955;m748
Potentilla Linnaeus [**k**:*P.* L. and *Argentina* Hill]	jm:cinquefoil; m:five-finger	124;j964;m752
P. egedii Wormskjöld var. *grandis* (Rydberg) J.T.Howell [**j**:*P. anserina* L. ssp. *pacifica* (JT.Howell) Rousi; **k**:*Argentina egedii* (Wormskjöld) Rydberg ssp. *e.*]		124;j966;m753
P. glandulosa Lindley ssp. *g.*		124;j968;m753
Prunus Linnaeus	m:stone-fruits	124;j969;m755
P. ilicifolia (Nuttall) Walpers ssp. *i.* [**m**:*P. i.* (Nuttall) Walpers; **k**:*P. i.* (Nuttall *ex* Hooker & Arnott) D.Dietrich]	rj:islay; rjm:holly-leaved cherry	124;j970;m757
Rosa Linnaeus	m:rose	124;j972;m758
R. californica Chamisso & Schlechtendal	rj:California rose	124;j973;m759
Rubus Linnaeus	m:blackberry, raspberry, etc.	124;j974;m759
R. procerus P.J.Mueller [**j**:*R. discolor* Weihe & Nees]	r:Himalaya berry; m:Himalaya-blackberry; j:Himalayan blackberry	124;j974;m760
R. ursinus Chamisso & Schlechtendal	rjm:California blackberry	124;j975;m760
Sanguisorba Linnaeus	m:burnet	124;j975;m761
S. minor Scopoli *ssp. muricata* Briquet [**m**:*S. m.* Scopoli; **k**:*S. m.* Scopoli ssp. *muricata* (Spach) Nordborg]	j:garden burnet	124;j975;m761
Rubiaceae Jussieu	rjm:madder family	125;j976;m761
Galium Linnaeus	rjm:bedstraw; jm:cleavers	125;j978;m762
G. andrewsii A.Gray *ssp. intermedium*[138] Dempster & Stebbins	j:phlox-leaved bedstraw	125;j981;m764
G. angustifolium Nuttall ssp. *a.*[139] [**k**:*G. a.* Nuttall *ex* A.Gray ssp. *a.*]	j:narrow-leaved bedstraw	125;j981;m764
G. angustifolium Nuttall ssp. *foliosum* (Hilend & Howell) Dempster & Stebbins	j:narrow-leaved bedstraw	125;j981;m764

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[138] Subspecies inferred based on distribution in **jm**, and Dempster (1979) specifically cites the Santa Monica Mountains for this ssp., but no collections are listed therein.

[139] Inadequate distribution details for ssp. *angustifolium* and ssp. *foliosum* given in **j**. For the nominate ssp., Dempster (1979) cites a collection by Howell at Point Mugu, and a collection by Raven east of Coldwater Canyon, and for ssp. *foliosum*, she cites only collections from the northern Channel Ids., but states that some plants from mainland Ventura Co. may be this subspecies.

scientific name(s)	common name(s)	reference pages
Rubiaceae *Galium* (cont.)		
G. aparine L.	j:goose grass	125;j982;m765
G. cliftonsmithii (Dempster) Dempster & Stebbins	j:Santa Barbara bedstraw	125;j982;m766
G. nuttallii A.Gray ssp. *n.*	j:San Diego bedstraw	125;j985;m768
Sherardia Linnaeus	rm:field madder	125;j986;m770
S. arvensis L.	j:field madder	125;j986;m770
Rutaceae Jussieu	rjm:rue family	125;j986;m770
Ruta Linnaeus	rm:rue	125;j988;m771
R. chalapensis L.		125;j988;m771
Salicaceae Mirbel	rjm:willow family	125;j988;m771
Populus Linnaeus	rjm:cottonwood; jm:poplar, aspen	126;j988;m771
P. fremontii S.Watson ssp. *f.* [**m**:*P. f.* S.Watson var. *f.*]	rj:Fremont cottonwood; j:alamo cottonwood	126;j990;m772
P. trichocarpa Torrey & A.Gray [**jk**:*P. balsamifera* L. ssp. *t.* (Torrey & A.Gray) Brayshaw; **m**:*P. t.* Torrey & A.Gray var. *t.*]	rj:black cottonwood	126;j990;m772
Salix Linnaeus	rjm:willow	126;j990;m773
S. hindsiana Bentham var. *leucodendroides* (Rowlee) C.Ball [**j**:*S. exigua* Nuttall; **k**:*S. h.* Bentham]	r:sandbar willow; j:narrow-leaved willow	126;j997;m774
S. laevigata Bebb [**m**:*S. l.* Bebb var. *l.*]	r:black willow; j:red willow	126;j997;m774
S. lasiandra Bentham var. *l.* [**jk**:*S. lucida* Muhlenberg ssp. *lasiandra* (Bentham) E.Murray]	j;shining willow	126;j998;m775
S. lasiolepis Bentham [**mk**:*S.l.* Bentham var. *l.*]	rjm:arroyo willow	126;j997;m775
Saururaceae E.Meyer[140]	jf:lizard's-tail family; m:lizard-tail family	126;j1000;m776;f37
Anemopsis Hooker [**kf**:*A.* Hooker & Arnott]	rmf:yerba mansa	126;j1002;m776;f37
A. californica Hooker [**jf**:*A. c.* (Nuttall) Hooker & Arnott]	j:yerba mansa	126;j1002;m771;f38
Saxifragaceae Jussieu	rjm:saxifrage family	126;j1002;m778
Boykinia Nuttall		127;j1003;m778
B. elata (Nuttall) E.Greene [**jk**:*B. occcidentalis* Torrey & A.Gray]		127;j1003;m778
B. rotundifolia C.Parry	j:round-leaved boykinia	127;j1003;m778
Lithophragma Nuttall [**k**:*L.* (Nuttall) Torrey & A.Gray]	j:woodland star; m:woodland-star	127;j1005;m782
L. affine A.Gray ssp. *mixtum* R.L.Taylor [**j**:*L. a.* A.Gray]	r:woodland star	127;j1006;m782
Ribes Linnaeus[141]	rm:currant, gooseberry	127;j677;m784
R. aureum Pursh var. *gracillimum* (Coville & Britton) Jepson	r:golden currant[142]	127;j677;m785
R. californicum Hooker & Arnott var. *hesperium* (McClatchie) Jepson	j:hillside gooseberry[143]	127;j677;m785

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[140] Mabberley (1997) gives the author as Voigt.

[141] Treated in the gooseberry family: Grossulariaceae DC in **jk**.

[142] Common name applied to either of two varieties in **j**, but only to nominate variety (not ours) in **m**.

[143] Common name applied to either of two varieties in j.

scientific name(s)	common name(s)	reference pages
Saxifragaceae (cont.)		
R. malvaceum J.E.Smith var. *indecorum* (Eastwood) Jancz.[jk:*R. indecorum* Eastwood]	j:white-flowering currant; m:white-flowered currant	127;j678;m787
R. malvaceum J.E.Smith ssp. *viridifolium* Abrams [jmk:*R. m.* J.E.Smith var. *v.* Abrams]	rj:chaparral currant[144]	127;j679;m787
R. speciosum Pursh	rjm:fuchsia-flowered gooseberry	127;j679;m788
Saxifraga Linnaeus	rjm:saxifrage	127;j1009;m789
S. californica E.Greene		127;j1009;m789
Scrophulariaceae Jussieu	rjm:figwort family	128;j1011;m789
Antirrhinum Linnaeus[145] [k:*Sairocarpus* D.A.Sutton (part) and *Neogaerrhinum* Rothmaler (part)]	jm:snapdragon	129;j1012;m791
A. coulterianum Bentham [m:*A. c.* Bentham *in* A.DC.; k:*Sairocarpus coulterianus* (Bentham *ex* A.DC.) D.A.Sutton]		129;j1014;m791
A. kelloggii E.Greene [k:*Neogaerrhinum strictum* (Hooker & Arnott) Rothmaler]		129;j1014;m791
A. multiflorum Pennell [k:*Sairocarpus multiflorus* (Pennell) D.A.Sutton]	r:bush snapdragon	129;j1015;m793
A. nuttallianum Bentham[146] [m:*A. n.* Bentham *in* A.DC.; k:*Sairocarpus nuttallianus* (Bentham *ex* A.DC.) D.A.Sutton]		129;j1015;m793
Castilleja Mutis *ex* Linnaeus [m:*Castilleja* Mutis; k:*C. Mutis ex* L. f.]	rj:Indian paint brush; m:paint-brush; j:owl's-clover[147]	129;j1016;m793
C. affinis Hooker & Arnott var. *contentiosa* (J.F.Macbride) Munz [j:*C. a.* Hooker & Arnott ssp. *a.*; m:C. a. Hooker & Arnott var. *c.* (J.F.Macbride) Bacigalupi; k:*C. a.* Hooker & Arnott]		129;j1018;m795
C. foliolosa Hooker & Arnott	j:woolly Indian paintbrush	129;j1021;m795
C. martinii Abrams [j:*C. applegatei* Fernald ssp. *m.* (Abrams) Chuang & Heckard; mk:*C. m.* Abrams var. *m.*]		130;j1020;m796
C. stenantha A.Gray [j:*C. minor* (A.Gray) A.Gray ssp. *spiralis* (Jepson) Chuang & Heckard]		130;j1022;m797
Collinsia Nuttall		130;j1024;m798
C. heterophylla Buist *ex* Graham [j:*C. h.* Graham; mk:*C. h.* Buist *ex* Graham var. *h.*][148]	rjm:Chinese houses; m:innocence	130;j1026;m799
C. parryi A.Gray		130;j1027;m799

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[144] Common name applied to either of two varieties in j

[145] North American species in k are segregated among ten genera, including *Antirrhinum*, which retains one species (not ours).

[146] Subspecies not specified in r. A collection of the nominate ssp. from Playa del Rey (*Abrams 2496*) is cited in Thompson (1988), however, all cited specimens from the Santa Monica Mountains are ssp. *subsessile* (A.Gray) D.M.Thompson.

[147] *Orthocarpus* is included in *Castilleja* in j

[148] Authority in j corrected (see *The Jepson Globe* vol. 8 no. 2 1997).

scientific name(s)	common name(s)	reference pages
Scrophulariaceae (cont.)		
Cordylanthus Nuttall *ex* Bentham [**m**:C. Nuttall *ex* Bentham *in* DC.]	**jm**:bird's-beak	130;j1027;m800
C. filifolius[149] Nuttall *ex* Bentham [**m**:*C. f.* Nuttall *ex* Bentham *in* DC.; j:*C. rigidus* (Bentham) Jepson ssp. *setigerus* Chuang & Heckard]		130;j1030;m801
C. maritimus Nuttall *ex* Bentham [j:*C. m.* Bentham ssp. *m.*; **m**:*C. m.* Nuttall *ex* Bentham *in* DC.; **k**:*C. m.* Nuttall *ex* Bentham ssp. *m.*]	j:salt marsh bird's-beak	130;j1029;m801
Diplacus Nuttall[150] [**jm**:*Mimulus* Linnaeus (part)]	r:sticky or bush monkey flower	130;j1039;m806
D. longiflorus Nuttall [**m**:*Mimulus l.* (Nuttall) A.L.Grant ssp. *l.*; j:*Mimulus aurantiacus* Curtis]		130;j1040;m813
Keckiella Straw		130;j1033;m803
K. cordifolia (Bentham) Straw		130;j1034;m804
Linaria P.Miller [**k**:*L.* P.Miller and *Nuttallanthus* D.A.Sutton]	r**jm**:toadflax	130;j1036;m805
L. pinifolia (Poiret) Thellung		130;j1036;m--
L. texana Scheele [j:*L. canadensis* (L.) Dumont de Courset[151]; **m**:*L. c.* (L.) Dumont de Courset var. *t.* (Scheele) Pennell; **k**:*Nuttallanthus texanus* (Scheele) D.A.Sutton]	j:blue toadflax	130;j1036;m805
Mimulus Linnaeus [**k**:*M.* L. and *Mimetanthe* E.Greene]	r:monkey flower; j:monkey flower; **m**:monkey-flower	131;1037;m806
M. brevipes Bentham		131;j1042;m810
M. cardinalis Douglas *ex* Bentham [j:*M. c.* Bentham]		131;j1042;m810
M. floribundus Douglas *ex* Lindley [**jk**:*M. f.* Lindley]		131;j1042;m811
M. guttatus F.E.Fischer *ex* DC. [**m**:*M. g.* F.E.Fischer *ex* DC. ssp. *g.*; **jk**:*M. g.* DC.]		131;j1042;m811
M. pilosus (Bentham) S.Watson [**k**:*Mimetanthe pilosa* (Bentham) E.Greene]		131;j1044;m814
Orobanche[152] Linnaeus	r:broomrape; **jm**:broom-rape	131;j805;m617
O. bulbosa G.Beck [**mk**:*O. b.* (A.Gray) G.Beck]		131;j806;m618
O. californica Chamisso & Schlechtendal ssp. *grandis* Heckard		131;j806;m618
O. fasciculata Nuttall	j:clustered broom-rape	131;j806;m619
O. uniflora L. ssp. *occidentalis* (E.Greene) Ferris [j:*O. u.* L.; **m**:*O. u.* L. ssp. *o.* Ferris; **k**:*O. u.* L. ssp. *o.*(E.Greene) Abrams *ex* Ferris]	j:naked broom-rape	132;j808;m619
O. vallicola (Jepson) Heckard[153]		132;j808;m620

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[149] According to j, *Cordylanthus filifolius* is misapplied to *C. rigidus* ssp. *setigerus*, however, **k** gives *C. f.* as a synonym of the nominate ssp. of *C. rigidus*, which according to j does not occur in our area.

[150] Treated in j in the genus *Mimulus*, subgenus *Schizoplacus*, section *Diplacus*. See perennial *Mimulus* in **m**.

[151] Slightly different synonym than this: *L. c.* (L.) Chaz. given in **k**.

[152] Treated in the broom-rape family Orobanchaceae Ventenat in **jmk**.

[153] Indicated as "difficult to separate from *O. californica* ssp. *jepsonii* (Munz) Heckard" in j. Under that taxon it states "plants from [south coast] that key here are an undescribed ssp."

scientific name(s)	common name(s)	reference pages
Scrophulariaceae (cont.)		
Orthocarpus Nuttall[154]	r:owl's-clover	132;j1048;m816
O. densiflorus Bentham var. *d.* [j:*Castilleja densiflora* (Bentham) Chuang & Heckard ssp. *d.*][155]	m:owl's-clover	132;j1020;m817
O. purpurascens Bentham var. *pallidus* Keck [j:*Castilleja exserta* (A.A.Heller) Chuang & Heckard ssp. *e.*]	j:purple owl's-clover (white variety)	132;j1020;m818
O. purpurascens Bentham var. *p.* [j:*Castilleja exserta* (A.A.Heller) Chuang & Heckard ssp. *e.*]	j:purple owl's-clover; m:owl's-clover	132;j1020;m817
Pedicularis Linnaeus	jm:lousewort	132;j1049;m818
P. densiflora Bentham *ex* Hooker [j:*P. d.* Hooker; **k**:*P. d.* Bentham *ex* Hooker ssp. *d.*]	rjm:Indian warrior	132;j1050;m818
Penstemon Mitchell [k:*P.* Schmidel]	j:beardtongue; m:beard-tongue	132;j1050;m818
P. centranthifolius Bentham [j:*P. c.* (Bentham) Bentham]	rjm:scarlet bugler	132;j1055;m821
P. heterophyllus Lindley ssp. *australis* (Munz & I.M.Johnston) Keck [jm:*P. h.* Lindley var. *a.* Munz & I.M.Johnston]		132;j1056;m822
P. × *parishii*[156] A.Gray (*pro sp.*) [*P. centranthifolius* × *P. spectabilis*]		132;j1055;m824
P. spectabilis Thurber *ex* A.Gray ssp. *subviscosus* Keck [j:*P. s.* Thurber var. *subviscosus* (Keck) McMinn]		132;j1060;m825
Scrophularia Linnaeus	rjm:figwort	132;j1062;m825
S. californica Chamisso & Schlechtendal ssp. *c.*[157]	j:California figwort	132;j1062;m--
Veronica Linnaeus	rjm:speedwell; j:brooklime	133;j1066;m827
V. anagallis-aquatica L.	r:brooklime; j:water speedwell	133;j1066;m828
V. persica Poiret [k:*V. p.* Poiret var. *p.*]	j:Persian speedwell	133;j1067;m828
Simaroubaceae DeCandolle	rjm:quassia family; j:simarouba family	133;j1067;m828
Ailanthus Desfontaines	r:tree-of-heaven; m:tree of heaven	133;j1067;m829
A. altissima (P.Miller) Swingle	j:tree of heaven	133;j1067;m829
Solanaceae Jussieu	rjm:nightshade family	133;j1068;m829
Datura Linnaeus	r:jimson-weed; j:jimson weed; m:jimsonweed; jm:thorn-apple	133;j1070;m830
D. inoxia J.S.Miller [j:*D. wrightii* Regel; **m**:*D. meteloides* A.DC.; **k**:*D. i.* P.Miller]		133;j1070;m830
D. stramonium L.	j:jimson weed	133;j1070;m831
Lycium Linnaeus	j:box thorn; m:box-thorn	133;j1070;m831
L. californicum Nuttall *ex* A.Gray [jm:*L. c.* Nuttall]		133;j1071;m832

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[154] Our species transferred to genus *Castilleja*, sect. *Oncorhynchus* in j. The genus is retained, however, and described in j on page indicated. Other North American species segregated in **k** among *Castilleja* Mutis *ex* L. f., *Orthocarpus* Nuttall and *Triphysaria* Fischer & C.A.Meyer.

[155] Subspecies not reported in our range in j (although in **m**); ssp. *gracilis* (Bentham) Chuang & Heckard also expected?

[156] A named hybrid between *P. spectabilis* and *P. centranthifolius*.

[157] Subspecies inadvertently omitted from **m**. See Munz and Keck 1959 p. 642.

scientific name(s)	common name(s)	reference pages
Solanaceae (cont.)		
Lycopersicon P.Miller	**jm**:tomato	134;j1072;m834
L. esculentum P.Miller [**j**:*L. e.* L.; **k**:*L. e.* P.Miller var. *e.*]	**rj**:tomato	134;j1072;m834
Nicotiana Linnaeus	**rjm**:tobacco	134;j1072;m834
N. bigelovii (Torrey) S.Watson [**j**:*N. quadrivalvis* Pursh; **m**:*N. b.* (Torrey) S.Watson var. *b.*; **k**:*N. q.* Pursh var. *b.* (Torrey) S.Watson]		134;j1072;m835
N. glauca Graham	**rjm**:tree tobacco	134;j1072;m835
Petunia A.L.Jussieu [**k**:*P.* A.L.Jussieu and *Calibrachoa* Llave & Lexarza]		134;j1073;m835
P. parviflora A.L.Jussieu [**k**:*Calibrachoa p.* (A.L.Jussieu) D'Arcy]		134;j1073;m835
Salpichroa Miers		134;j1074;m837
S. origanifolia (Lamarck) Baillon	**rm**:lily-of-the-valley vine	134;j1074;m838
Solanum Linnaeus	**rjm**:nightshade	134;j1074;m838
S. cornutum auct. non Lamarck [**jmk**:*S. rostratum* Dunal]	**rm**:buffalo-bur; **j**:buffalo berry	134;j1077;m840
S. douglasii Dunal [**m**:*S. d.* Dunal *in* DC.]		134;j1076;m839
S. elaeagnifolium Cavanilles	**rm**:silverleaf-nettle; **j**:white horse-nettle	134;j1076;m839
S. nodiflorum Jacquin [**jk**:*S. americanum* P.Miller]		135;j1076;m839
S. sarachoides Sendtner *ex* Martius [**jk**:*S.* s. Sendtner]		135;j1077;m840
S. xanti[158] A.Gray var. *intermedium* Parish [**j**:*S. x.* A.Gray]		135;j1077;m841
Tamaricaceae Berchtold & J.Presl	**rjm**:tamarisk family	135;j1080;m843
Tamarix Linnaeus	**rjm**:tamarisk	135;j1080;m843
T. ramosissima Ledebour[159]		135;j1080;m844
Tropaeolaceae Berchtold & J.Presl	**j**:nasturtium family; **m**:tropaeolum family	135;j1081;m845
Tropaeolum Linnaeus	**rjm**:nasturtium	135;j1081;m845
T. majus L.	**rjm**:garden nasturtium	135;j1081;m845
Urticaceae Jussieu	**jmf**:nettle family	135;j1082;m846;f400
Hesperocnide Torrey	**j**:westernnettle	135;j1082;m846;f404
H. tenella Torrey	**f**:western-nettle	135;j1082;m846;f405
Parietaria Linnaeus	**rjmf**:pellitory	135;j1082;m846;f406
P. floridana Nuttall (misapplied) [**jf**:*P. hespera* B.D.Hinton var. *h.*][160]		135;j1083;m846;f407
Soleirolia Gaudichaud-Beaupré	**j**:baby's-tears	136;j1083;m847;f411
S. soleirolii (Requien) Dandy	**r**:baby-tears **f**:baby's-tears	136;j1083;m847;f412
Urtica Linnaeus	**rmf**:nettle; **j**:stinging nettle; **f**:ortie	136;j1083;m847;f401
U. dioica L. ssp. *holoserica* (Nuttall) Thorne [**m**:*U. h.* Nuttall]	**j**:hoary nettle	136;j1083;m847;f403

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[158] The correct spelling given in j is *xanti*, named for Xantus.

[159] Includes *T. pentandra* Pallas, and may be the same as *T. chinensis* Loureiro, according to j The former a synonym of the latter distinct from *T. ramosissima* in **k**.

[160] *Parietaria hespera* var. *californica* B.D.Hinton could occur here as well (jf).

scientific name(s)	common name(s)	reference pages
Urticaceae *Urtica* (cont.)		
U. urens L.	**rjm**:dwarf nettle; **f**:dog nettle, burning nettle	136;j1083;m847;f404
Valerianaceae Batsch	**jm**:valerian family	136;j1083;m847
Centranthus Necker *ex* Lamarck & DC. [**m**:*Kenthranthus* Necker][161]		136;j1084;m847
C. ruber (L.) DC. [**m**:*Kentranthus r.* (L.) DC.]	**rjm**:red valerian	136;j1084;m849
Plectritis (Lindley) DC. [**m**:*P.* DC.]		136;j1084;m849
P. ciliosa (E.Greene) Jepson ssp. *insignis* (Suksdorf) D.Morey		136;j1084;m849
Verbenaceae J.Saint-Hilaire	**jm**:vervain family	136;j1085;m850
Phyla Lourteig [**m**:*Lippia* Linnaeus]		136;j1086;m850
P. lanceolata (Michaux) E.Greene [**m**:*Lippia l.* Michaux]		136;j1086;m850
P. nodiflora (L.) E.Greene var. *rosea*[162] (D.Don) Moldenke [**j**:*P. n.* (L.) E.Greene var. *r.* (D.Don) Munz; **m**:*Lippia n.* Michaux var. *r.* (D.Don) Munz; **k**:*P. n.* (L.) E.Greene]	**m**:garden lippia	137;j1086;m850
Verbena Linnaeus	**m**:verbena, vervain	137;j1088;m851
V. lasiostachys Link var. *l.* [**mk**:*V. l.* Link]		137;j1088;m851
V. robusta E.Greene [**j**:*V. lasiostachys* Link var. *scabrida* Moldenke]		137;j1088;m852
Violaceae Batsch	**jm**:violet family	137;j1089;m852
Viola Linnaeus	**rjm**:violet	137;j1089;m852
V. pedunculata Torrey & A.Gray [**k**:*V. p.* Torrey & A.Gray ssp. *p.*]	**r**:Johnny jump-up, wild pansy; **jm**:Johnny-jump-up	137;j1091;m854
Viscaceae Batsch	**rjm**:mistletoe family	137;j1092;m856
Phoradendron Nuttall	**rjm**:mistletoe	137;j1096;m858
P. tomentosum (DC.) Engelmann *ex* A.Gray ssp. *macrophyllum* (Engelmann) Wiens [**j**:*P. m.* (Engelmann) Cockerell; **m**:*P. t.* (Engelmann *ex* A.Gray) ssp. *m.* (Engelmann) Weins; **k**:*P. m.* (Engelmann) Cockerell ssp. *m.*]	**j**:big leaf mistletoe	137;j1097;m858
P. villosum (Nuttall) Nuttall ssp. *v.* [**j**:*P. v.* (Nuttall) Nuttall; **m**:*P. v.* (Nuttall *in* Torrey & A.Gray) Nuttall]	**j**:oak mistletoe	137;j1097;m858
Vitaceae Jussieu	**rjm**:grape family	137;j1097;m858
Vitis Linnaeus	**jm**:grape	137;j1097;m859
V. girdiana Munson	**j**:desert wild grape	137;j1098;m859
Zygophyllaceae R.Brown	**rjm**:caltrop family	138;j1098;m859
Tribulus Linnaeus	**rjm**:puncture vine; **jm**:caltrop	138;j1099;m862
T. terrestris L.		138;j1099;m862

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[161] Confusion between *Centranthus* and *Kentranthus*? Mabberley (1997) uses *Centranthus* DC.

[162] In j, this South American variety is mentioned in the description of the nominate var.; a native variety whose reported range includes ours.

scientific name(s)	common name(s)	reference pages
MONOCOTYLEDONAE [**mj**:MONOCOTYLEDONES]	**j**:monocots	138;j1100;m862
Agavaceae Dumortier [**j**:Liliaceae (part)]	**rm**:agave family	139;j1170;m863
Nolina Michaux	**j**:beargrass; **m**:nolina	--;j1203;m865
N. cismontana J.C.Dice[163]		--;j--;m--
Yucca Linnaeus	**jm**:Spanish bayonet; **m**:yucca	139;j1210;m866
Y. whipplei Torrey ssp. *intermedia* Haines [**j**:*Y. w.* Torrey; **k**:*Y. w.* Torrey var. *w.*]	**rj**:our Lord's candle	139;j1210;m867
Alismataceae Ventenat	**rjm**:water-plantain family	139;j1101;m868
Alisma Linnaeus	**rjm**:water-plantain	139;j1101;m868
A. plantago-aquatica L. [**m**:*A. triviale* Pursh]		139;j1101;m868
Echinodorus L.C.Richard *ex* Engelmann [**m**:*E.* L.C.Richard]	**rm**:bur head; **j**:burhead	139;j1101;m868
E. rostratus (Nuttall) Engelmann[164] [**jmk**:*E. berteroi* (Sprengel) Fassett]		139;j1101;m870
Alliaceae Batsch *ex* Borkhausen [**jk**:Liliaceae (part); **m**:Amaryllidaceae J.Saint-Hilaire (part)]	**r**:onion family; **m**:amaryllis family	139;j1170;m871
Allium Linnaeus	**j**:onion, garlic; **m**:wild onion	140;j1172;m871
A. haematochiton S.Watson		140;j1177;m875
A. peninsulare Lemmon var. *p.* [**k**:*A. p.* Lemmon *ex* E.Greene var. *p.*]		140;j1178;m876
Bloomeria Kellogg	**j**:goldenstar; **m**:golden stars	140;j1180;m877
B. crocea (Torrey) Coville [**mk**:*B. c.* (Torrey) Coville var. *c.*]	**r**:goldenstars; **j**:common goldenstar	140;j1180;m877
Brodiaea J.E.Smith	**m**:brodiaea	140;j1180;m877
B. jolonensis Eastwood		140;j1182;m878
Dichelostemma Kunth		140;j1190;m878
D. pulchellum[165] (Salisbury) A.A.Heller [**j**:*D. capitatum* Alph.Wood ssp. *c.*; **k**:*D. c.* (Bentham) Alph.Wood ssp. *c.*]	**j**:blue dicks[166]	140;j1192;m878
Calochortaceae Dumortier [**jmk**:Liliaceae (part)]		140;j1170;m919
Calochortus Pursh	**r**:mariposa lily; **m**:mariposa-lily, star-tulip, butterfly tulip	140;j1183;m920
C. albus Douglas *ex* Bentham [**j**:*C. a.* Bentham]	**rjm**:fairy lantern; **rm**:globe-lily; **j**:white globe lily	140;j1185;m921
C. catalinae S.Watson	**j**:Catalina mariposa lily	140;j1185;m923
C. clavatus S.Watson ssp. *pallidus* (Hoover) Munz [**k**:*C. c.* S.Watson var. *p.*]		141;j1185;m923

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[163] Occurs in the Simi Hills; should be included in the Santa Monica Mountains Flora, since the species occurs within the Cheseboro-Palo Comado unit of the SMM National Recreation Area. See Hess and Dice (1995). Reference in j under *N. parryi* to "coastal plants from WTR (Ventura Co.) and n&w PR are an undescribed species" are *N. cismontana*, differing from *N. parryi* in having shorter stems, fewer leaves, and smaller diameter flowering stalks.

[164] Name not referenced in j. Synomym in **k** differs slightly: *E. r.* (Nuttall) Engelmann *ex* A.Gray.

[165] Spelled *D. pulchella* in **m**.

[166] Common name applied to two subspecies.

scientific name(s)	common name(s)	reference pages
Calochortaceae *Calochortus* (cont.)		
C. plummerae S.Watson [**jmk**:*C. p.* E.Greene]	j:Plummer's mariposa lily	141;j1188;m925
C. splendens Douglas *ex* Bentham [j:*C. s.* Bentham]		141;j1188;m925
C. venustus Douglas *ex* Bentham [j:*C. v.* Bentham]		141;j1188;m925
Cyperaceae Jussieu	rjm:sedge family	141;j1106;m883
Carex Linnaeus	rjm:sedge	141;j1107;m884
C. barbarae Dewey		141;j1122;m887
C. praegracilis W.Boott		141;j1132;m893
C. senta F.Boott		141;j1134;m893
C. spissa Bailey		141;j1136;m894
C. triquetra F.Boott		141;j1136;m895
Cyperus Linnaeus	r:umbrella sedge; j:nutsedge, galingale; m:umbrella-sedge	142;j1138;m895
C. alternifolius L. (misapplied) [**jk**:*C. involucratus* Rottboel]	r:umbrella plant; m:umbrella-plant	142;j1139;m896
C. eragrostis Lamarck		142;j1139;m897
C. erythrorhizos Muhlenberg		142;j1139;m897
C. esculentus L. [**k**:*C. e.* L. var. *e.*]	r:yellow nut-grass; m:nut-grass	142;j1139;m897
C. niger RuízLópez & Pavón var. *capitatus* (Britton) O'Neill [**jk**:*C. n.* RuízLópez & Pavón]		142;j1139;m897
C. odoratus L.		142;j1139;m898
C. rotundus L.	rm:purple nut-grass; j:purple nutsedge	142;j1139;m898
Eleocharis R.Brown	r:spike rush; j:spikerush; m:spike-rush	142;j1140;m898
E. macrostachya Britton *in* J.E.Smith [j:*E. m.* Britton; **k**:*E. palustris* (L.) Roemer & J.A.Schulte]		142;j1142;m900
E. montevidensis Kunth var. *m.* [**jmk**:*E. m.* Kunth]		142;j1142;m900
E. montevidensis Kunth var. *parishii* (Britton) V.Grant [j:*E. m.* Kunth; **mk**:*E. p.* Britton]		142;j1142;m900
E. radicans (Poiret) Kunth [**k**:*E. r.* (A.Dietrich) Kunth]		142;j1142;m900
Scirpus Linnaeus	rm:bulrush, tule	143;j1146;m902
S. acutus Muhlenberg [j:*S. a.* Bigelow var. *occidentalis* (S.Watson) Beetle; **k**:*S. a.* Muhlenberg *ex* Bigelow]	r:common tule; j:tule; m:hard-stem bulrush	143;j1147;m902
S. americanus Persoon		143;j1147;m902
S. californicus (C.A.Meyer) Steudel		143;j1147;m902
S. cernuus M.Vahl var. *californicus* (Torrey) Beetle [j:*S. cernuus* (Roemer & Schultes) M.Vahl][167]		143;j1147;m903
S. maritimus L. [**m**:*S. robustus* Pursh][168]		143;j1147;m903

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[167] Authority in j corrected (see *The Jepson Globe* vol. 8 no. 3 1997).

[168] Although **m** treats synomyms of *Scirpus maritimus* as *S. robustus*, the latter is not a synomym of *S. maritimus*, and they are treated separately in jk.

scientific name(s)	common name(s)	reference pages
Hyacinthaceae Batsch *ex* Borkhausen [**jk**:Liliaceae (part)]		143;j1170;m919
Chlorogalum Kunth [**k**:C. (Lindley) Kunth]	**rjm**:soap plant; **jm**:amole	143;j1189;m926
C. pomeridianum (DC.) Kunth var. *p.*		143;j1190;m926
Iridaceae Jussieu	**rjm**:iris family	143;j1151;m905
Sisyrinchium Linnaeus		143;j1155;m907
S. bellum S.Watson	**rj**:blue-eyed-grass; **m**:ablue-eyed grass	143;j1156;m908
Juncaceae Jussieu	**rjm**:rush family	143;j1157;m908
Juncus Linnaeus	**rjm**:rush; **m**:wire-grass	143;j1157;m909
J. acutus L. var. *sphaerocarpus* Engelmann [**jk**:*J. a.* L. ssp. *leopoldii* (Parlatore) Snog.]		144;j1159;m910
J. balticus Willdenow		144;j1159;m910
J. bufonius L. var. *b.*[169] [**k**:*J. b.* L.]	**rj**:toad rush[170]	144;j1159;m911
J. macrophyllus Coville		144;j1162;m912
J. mexicanus Willdenow [**k**:*J. m.* Willdenow *ex* J.A. & J.H.Schultes]		144;j1164;m912
J. patens E.Meyer		144;j1164;m913
J. phaeocephalus Engelmann var. *paniculatus*[171] Engelmann		144;j1164;m913
J. textilis Buchenau		144;j1165;m915
J. torreyi Coville		144;j1165;m915
J. xiphioides E.Meyer		144;j1165;m916
Juncaginaceae L.Richard	**r**:arrow weed family; **jm**:arrow-grass family	145;j1166;m916
Triglochin Linnaeus	**r**:arrow grass; **jm**:arrow-grass	145;j1168;m917
T. concinna Burtt Davy var. *c.* [**m**:*T. concinnum* Burtt Davy var. *c.*; **k**:*T. concinnum* Burtt-Davy]	**j**:arrow-grass[172]	145;j1168;m917
Lemnaceae Martinov	**rjm**:duckweed family	145;j1168;m918
Lemna Linnaeus	**rjm**:duckweed	145;j1168;m918
L. gibba L.		145;j1169;m918
L. minor L.		145;j1169;m918
L. trisulca L.		145;j1169;m919
Wolfiella Hegelmaier	**j**:mud-midget	145;j1170;m919
W. lingulata (Hegelmaier) Hegelmaier[173]		145;j1170;m--
Liliaceae Jussieu (*sensu stricto*)	**rj**:lily family	145;j1170;m919
Fritillaria Linnaeus	**jm**:fritillary	145;j1194;m926
F. biflora L. [**jmk**:*F. b.* Lindley]	**rjm**:chocolate lily, mission bells	145;j1194;m927

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[169] The author has recently collected material in these mountains referrable to *Juncus bufonius* var. *congestus* Wahlenberg, although it is not indicated for our area in **j**. Variety *occidentalis* F.J.Hermann, which is "relatively small in all features" compared to the nominate var. might potentially occur here also, according to distribution in **j**.

[170] Common name applied to all California varieties in **j**.

[171] According the the distribution in **j**, the nominate variety, which differs from var. *paniculatus* in having many flowers per cluster, could also occur here.

[172] Common name applies to two varieties in **j**

[173] Inadvertently omitted from **m**. See Munz and Keck 1959 p. 1359.

scientific name(s)	common name(s)	reference pages
Liliaceae (cont.)		
Lilium Linnaeus	jm:lily	145;j1198;m927
L. humboldtii Roezl & Leichtlin var. *ocellatum* (Kellogg) Elwes[174] [j:*L. h.* Roezl & Leichtlin ssp. *o.* (Kellogg) Thorne; k:*L. h.* Roezl & Leichtlin *ex* Duchartre ssp. *o.* (Kellogg) Thorne]		145;j1199;m928
Melanthiaceae Batsch *ex* Borkhausen [jk:**Liliaceae** (part)]		146;j1170;m919
Zigadenus Michaux	j:death camas; m:zygadene	146;j1210;m929
Z. fremontii Torrey [j:*Z. f.* (Torrey) S.Watson; k:*Z. f.* (Torrey) Torrey *ex* S.Watson][175]	r:star-lily	146;j1211;m931
Najadaceae Jussieu [j:Hydrocharitaceae Jussieu (part)]	rm:water-nymph family; j:waterweed family	146;j1150;m931
Najas Linnaeus		146;j1151;m931
N. flexilis (Willdenow) Rostkovius & Schmidt[176]	j:slender water nymph	146;j1151;m–
Orchidaceae Jussieu	jm:orchid family	146;j1210;m931
Epipactis Swartz [k:*E.* Zinn]	rm:stream orchid; m:helleborine	146;j1214;m932
E. gigantea Douglas *ex* Hooker [j:*E. g.* Hooker]	j:stream orchid	146;j1214;m933
Habenaria Willdenow (part)[177] [jk:*Piperia* Rydberg]	r:rein orchid	146;j1215;m933
H. unalascensis (Sprengel) S.Watson [jk:*Piperia u.* (Sprengel) Rydberg]	r:Alaska piperia	146;j1216;m933
Poaceae Caruel	rjm:grass family	147;j1218;m934
Agropyron [178] Gaertner (part) [jk:*Elymus* Linnaeus]	rm:wheat grass	151;j—;m940
A. parishii Scribner & J.G.Smith var. *laeve*[179] Scribner & J.G.Smith [jk:*Elymus stebbinsii* Gould]		151;j1256;m940
Agrostis Linnaeus (part) [km:*Agrostis* L. and *Polypogon* Desfontaines]	rm:bent grass; m:bentgrass	151;j1227;m941
A. diegoensis Vasey [j:*A. pallens* Trinius][180]		151;j1230;m941
A. exarata Trinius [k:*A. e.* Trinius var. *e.*]		151;j1229;m941
A. semiverticillata (Forsskål) C.Christensen[181] [j:*A. viridis* Gouan; k:*Polypogon viridis* (Gouan) Breistroffer]		151;j1230;m943
A. stolonifera L. [m:*A. s.* L. var. *major* (Gaudin) Farwell k:*A. gigantea* Roth]	r:creeping bentgrass	151;j1230;m943

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[174] The synonym in k differs slightly: *L. h.* Roezl & Leichtlin var. *o.* (Kellogg) Kellogg *ex* Elwes.

[175] Two varieties given in mk: nominate and var. *minor* (Hooker & Arnott) Jepson. Either or both are anticipated. Common name star-lily is applied only to the nominate variety.

[176] Inadvertently omitted from m. See Munz and Keck 1959 p. 1324.

[177] Many North American *Habenaria* segregated among *Platanthera* L.C.Richard, *Piperia* Rydberg, and *Coeloglossum* Hartman in k. California species of *Habenaria* transferred to *Piperia* and *Platanthera* in j.

[178] Only one (alien) California species (not ours) in this genus retained in j, namely, *A. desertorum* (Fischer) Schultes or 'desert crested wheatgrass'. All other California species segregated among *Elymus*, *Elytrigia* Desvaux, *Pascopyrum* A.Löve, and *Pseudoregneria* (Nevski) A.Löve.

[179] According to m, most California plants have glabrous nodes and are this variety.

[180] Treated separately in k.

[181] Apparently, this taxon is treated twice in m. Once on page 943 as *Agrostis semiverticillata*, and again on page 996 as *Polypogon semiverticillatus* (Forsskål) Hylander Both are synonyms of *Polypogon viridis* in k.

scientific name(s)	common name(s)	reference pages
Poaceae (cont.)		
Ammophila Host	jm:beachgrass	151;j1232;m944
A. arenaria (L.) Link	r:beachgrass; j:European beachgrass	151;j1232;m944
Andropogon Linnaeus	j:bluestem; m:beardgrass	151;j1233;m944
A. glomeratus (Walter) Britton, Sterns, & Poggenburg var. *scabriglumis* C.S.Campbell	r:bushy bluestem; j:southwestern bushy bluestem	151;j1233;m945
Aristida Linnaeus	j:three-awn; m:triple-awned grass	152;j1234;m945
A. adscensionis L.	r:six-week threeawn; j:six-weeks three-awn	152;j1234;m946
Arundo Linnaeus	m:giant reed	152;j1235;m947
A. donax L. [k:A. donax L. var. d.]	rj:giant reed	152;j1235;m947
Avena Linnaeus	rj:oats; m:oat	152;j1235;m947
A. barbata Brotero [j:*A. b.* Link; k:*A. b.* Pott *ex* Link]	r:slender oat; jm:slender wild oat	152;j1236;m947
A. fatua L.	rjm:wild oat	152;j1236;m947
A. sativa L.	r:common oat; jm:cultivated oat	152;j1236;m948
Bothriochloa Kuntze		152;j1236;m948
B. barbinodis (Lagasca) Herter var. *b.* [jm:*B. b.* (Lagasca) Herter]	rj:cane bluestem	152;j1238;m948
Briza Linnaeus	rm:quakinggrass; j:quaking grass	152;j1239;m950
B. minor L.		152;j1239;m950
Bromus Linnaeus	j:brome; m:bromegrass	152;j1239;m950
B. arizonicus (Shear) Stebbins		153;j1242;m952
B. carinatus Hooker & Arnott var. *c.*[182] [k:*B. c.* Hooker & Arnott]	j:California brome[183]	153;j1242;m952
B. diandrus Roth	rj:ripgut grass; m:ripgutgrass	153;j1242;m953
B. hordeaceus L. ssp. *h.* [j:*B. hordeaceus* L.]; m:*B. mollis* L. and *B. molliformis* Lloyd][184]	r:soft brome, soft chess	153;j1242;m955
B. madritensis L. ssp. *m.* [k:*B. m.* L.][185]	j:foxtail chess[186]	153;j1243;m955
B. pseudolaevipes Wagnon [j:*B. laevipes* Shear (part)][187]		153;j1243;m955
B. rubens L. [j:*B. madritensis* L. ssp. *rubens* (L.) Husnot]	rm:foxtail chess	153;j1243;m956
B. tectorum L. [k:*B. t.* L. var. *t.*]	rjm:downy brome, cheat grass	153;j1243;m956
B. trinii Desvaux [m:*B. t.* Desvaux *in* C.Gay; k:*B. berterianus* Colla]	j:Chilean chess	153;j1243;m956

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[182] Nominate var. inferred from j. Plants of dunes and meadows with crowded spikelets are var. *maritimus* (Piper) C.L.Hitchcock.

[183] Common name applies to all varieties in j.

[184] The latter given as *B. molliformis* Godron in j, not Lloyd as in m.

[185] As given in k, does not include *Bromus rubens* L.

[186] Common name applies to two subspecies in j, including one popularly known as red brome: See *B. rubens* L.

[187] According to j, plants from <900m in the CW and SW with glumes and lemmas evenly puberulent have been called *B. pseudolaevipes* Wagnon. The two taxa are separate in k.

scientific name(s)	common name(s)	reference pages
Poaceae *Bromus* (cont.)		
B. unioloides HBK.[188] [**jk**:*B. catharticus* M.Vahl; **m**:*B. u.* (Willdenow) HBK.]	r:rescue grass	153;j1242;m956
B. willdenovii Kunth [**jk**:*B. catharticus* M.Vahl]	r:rescue grass; m:rescuegrass	153;j1242;m956
Chloris Swartz	m:fingergrass	153;j1246;m958
C. gayana Kunth	rj:Rhodes grass; m:Rhodesgrass	153;j1246;m958
Cortaderia Stapf	rm:pampasgrass	153;j1247;m958
C. atacamensis (Philipi) Pilger [**jk**:*C. jubata* (Lemoine) Stapf]		153;j1247;m–
Crypsis Aiton	j:prickle grass	154;j1247;m959
C. niliacea Figari & DeNotaris [**jk**:*C. vaginiflora* (Forsskål) Opiz]		154;j1248;m959
Cynodon L.C.Richard		154;j1248;m959
C. dactylon (L.) Persoon [**k**:*C. d.* (L.) Persoon var. *d.*]	j:Bermuda grass; m:Bermudagrass	154;j1248;m959
Dactylis Linnaeus	j:orchard grass; m:orchardgrass	154;j1248;m960
D. glomerata L.	r:orchardgrass	154;j1248;m960
Digitaria Heister [**k**:D. Haller]	rm:crabgrass	154;j1250;m962
D. ciliaris (Retzius) Koeler[189]		154;j--;m--
D. ischaemum (Schreber) Schreber *ex* Muhlenberg [**j**:*D. i.* (Schreber) Muhlenberg; **k**:*D. i.* (Schreber) Muhlenberg var. *i.*]		154;j1252;m962
Distichlis Rafinesque	jm:saltgrass	154;j1252;m962
D. spicata (L.) E.Greene ssp. *s.* [**jk**:*D. s.* (L.) E.Greene; **m**:*D. s.* (L.) E.Greene var. *s.*]	r:salt grass	154;j1252;m963
Echinochloa Palisot de Beauvois		154;j1252;m963
E. colona (L.) Link [**m**:*E. colonum* (L.) Link]	m:jungle-rice	154;j1252;m964
E. crus-galli (L.) Palisot de Beauvois [**m**:*E. crusgalli* (L.) Palisot de Beauvois var. *c.*]	rm:barnyard grass	154;j1252;m964
Ehrharta Thunberg		154;j1253;m964
E. erecta Lamarck		154;j1253;m965
Elymus[190] Linnaeus (part) [**jk**:*E.* L. and *Leymus* Hochstetter]	rm:ryegrass	155;j1253;m965
E. condensatus K.Presl [**j**:*Leymus condensatus* (C.Presl) A.Löve; **k**:*L. c.* (J.Presl) A.Löve][191]	r:giant ryegrass	155;j1268;m966
E. glaucus Buckley ssp. *g.*	j:blue wildrye[192]	155;j1254;m966
E. multisetus (J.G.Smith) Burrt Davy [**m**:*Sitanion jubatum* J.G.Smith; **k**:*E. m.* M.E.Jones]	r:squirrel-tail; j:big squirreltail	155;j1256;m1000
E. triticoides Buckley [**jk**:*Leymus t.* (Buckley) Pilger]		155;j1270;m966
Eragrostis Palisot de Beauvois [**k**:*E.* vonWolf]	j:lovegrass	155;j1257;m968
E. barrelieri Daveau		155;j1257;m968

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[188] This and the next species are reduced to synonymy in **jk**

[189] Not included in **jm**.

[190] California species have been segregated in **jk** among *Elymus* L., *Leymus* Hochstetter, and *Taeniatherum* Nevski.

[191] Confusion whether author is Carel (Karel) Presl or Jan Presl.

[192] Common name applies to all subspecies in **j**.

scientific name(s)	common name(s)	reference pages
Poaceae *Eragrostis* (cont.)		
E. cilianensis (Allioni) E.Mosher [**j**:*E. c.* (Allioni) Janchen; **k**:*E. c.* (Allioni) Lutati *ex* Janchen]	rjm:stinkgrass	155;j1257;m969
E. hypnoides (Lamarck) Britton, Sterns, & Poggenburg	r:teal lovegrass	155;j1258;m969
E. orcuttiana Vasey [**j**:*E. mexicana* (Hornemann) Link ssp. *virescens* (C.Presl)[193] S.D.Koch & E.Sánchez]		155;j1258;m969
Festuca Linnaeus	rjm:fescue	155;j1259;m971
F. arundinacea Schreber	j:tall fescue	155;j1260;m972
F. elmeri Schribner & Merrill var. *conferta* (Hackel) A.S.Hitchcock [**jk**:*F. e.* Schribner & Merrill][194]		156;j1260;m--
F. pratensis Hudson	rjm:meadow fescue	156;j1260;m973
Gastridium Palisot de Beauvois	m:nitgrass	156;j1262;m973
G. ventricosum (Gouan) Schinz & Thellung	rj:nit grass	156;j1262;m974
Hordeum Linnaeus	rjm:barley	156;j1264;m975
H. californicum Covas & Stebbins [**j**:*H. brachyantherum* Nevski ssp. *c.* (Covas & Stebbins) V.Brothmer, N.Jacobsen & O.Seberg]		156;j1266;m976
H. geniculatum Allioni [**jk**:*H. marinum* Hudson ssp. *gussoneanum* (Parlatore) Thellung]	j:Mediterranean barley	156;j1266;m977
H. intercedens Nevski [**m**:*H. pusillum* Nuttall][195]	r:little barley	156;j1266;m977
H. murinum L.[196] ssp. *glaucum* (Steudel)Tzvlev [**m**:*H. g.* Steudel]	r:foxtail barley	156;j1266;m977
H. murinum L. ssp. *leporinum* (Link) Archangeli [**m**:*H. l.* Link]	r:hare barley	156;j1266;m977
H. vulgare L.[197]	rm:common barley	156;j---;m977
Koeleria Persoon		156;j1267;m978
K. pyramidata (Lamarck) Palisot de Beauvois [**jk**:*K. macrantha* (Ledebour) J.A.Schultes; **m**:*K. m.* (Ledebour) Sprengel]	rjm:Junegrass	156;j1267;m978
Lamarckia Moench	jm:goldentop	157;j1267;m978
L. aurea Moench [**mk**:*L. a.* (L.) Moench	r:goldentop	157;j1267;m978
Leptochloa Palisot de Beauvois	jm:strangletop	157;j1268;m979
L. fascicularis (Lamarck) A.Gray [**k**:*L. f.* (Lamarck) A.Gray var. *f.*]	j:bearded strangletop	157;j1268;m979
L. uninervia (J.Presl) A.S.Hitchcock & Chase	rj:Mexican strangletop	157;j1268;m979
Lolium Linnaeus	rjmryegrass; m:darnel	157;j1270;m979
L. perenne L. ssp. *p.*[198] [**j**:*L. p.* L.]	rj:perennial ryegrass	157;j1270;m980
L. perenne L. ssp. *multiflorum* (Lamarck) Husnot [**j**:*L. m.* Lamarck]	jm:Italian ryegrass	157;j1270;m979
L. temulentum L.	rjm:darnel	157;j1270;m980
Melica Linnaeus	jm:melic; j:oniongrass	157;j1271;m980
M. imperfecta Trinius		157;j1271;m982

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[193] Given in **k** as J.Presl.

[194] Species and variety not given in **m**. Munz and Keck (1959 p. 1477) include *Festuca elmeri* var. *luxurians* Piper, indicating that an earlier synonym is *F. jonesii* var. *conferta* Hackel.

[195] These are retained as two separate species in **k**.

[196] For California, three subspecies are recognized in j These together comprise *H. murinum* of California references. Two subspecies are reported for the range in r. The nominate subspecies also is anticipated on the basis of distribution in j.

[197] Not included in j.

[198] Suspect error in r using variety here; subspecies probably intended. Note inconsistency in text in r.

scientific name(s)	common name(s)	reference pages
Poaceae (cont.)		
Monanthochloe Engelmann	**jm**:shoregrass	157;**j**1272;**m**982
M. littoralis Engelmann		157;**j**1272;**m**982
Muhlenbergia Schreber	**j**:muhly	157;**j**1272;**m**982
M. microsperma (DC.) Kunth [**jk**:*M. m.* (DC.) Trinius][199]	**j**:littleseed muhly	157;**j**1274;**m**984
M. rigens (Bentham) A.S.Hitchcock	**rj**:deergrass	157;**j**1274;**m**984
Oryzopsis Michaux (part) [**j**:*Piptatherum* Palisot de Beauvois]	**rm**:ricegrass	157;**j**1282;**m**985
O. miliacea (L.) Bentham & Hooker *ex* Ascherson & Schweinfurth [**jk**:*Piptatherum miliaceum* (L.) Cosson; **m**:*O. m.* (L.) Bentham]	**rj**:smilo grass	157;**j**1283;**m**986
Panicum Linnaeus	**r**:panic grass; **j**:panicgrass, millet	158;**j**1277;**m**986
P. capillare L. var. *occidentale* Rydberg [**jk**:*P. c.* L.]	**j**:witchgrass	158;**j**1278;**m**986
P. miliaceum L.	**r**:broom-corn millet; **jm**:broomcorn millet	158;**j**1287;**m**987
Parapholis C.E.Hubbard		158;**j**1278;**m**987
P. incurva (L.) C.E.Hubbard	**rj**:sickle grass; **m**:sickle-grass	158;**j**1278;**m**987
Paspalum Linnaeus		158;**j**1280;**m**987
P. dilitatum Poiret	**rj**:Dallis grass	158;**j**1280;**m**988
P. paspalodes (Michaux) Scribner[200] [**jmk**:*P. distichum* L.]	**rm**:knotgrass	158;**j**1280;**m**988
Pennisetum L.C.Richard [**k**:*P.* L.C.Richard *ex* Persoon]		158;**j**1280;**m**988
P. clandestinum Hochstetter *ex* Chiovenda [**j**:*P. c.* Chiovenda]	**rjm**:Kikuyu grass	158;**j**1280;**m**988
P. setaceum (Forsskål) Chiovenda[201]	**m**:fountain grass	158;**j**1281;**m**988
Phalaris Linnaeus	**rm**:Canary grass	158;**j**1281;**m**988
P. aquatica L.	**rjm**:Harding grass	159;**j**1281;**m**989
P. canariensis L.	**j**:Canary grass	159;**j**1282;**m**989
P. minor Retzius		159;**j**1282;**m**989
P. paradoxa L.		159;**j**1282;**m**989
Phragmites Trinius [**k**:*P.* Adanson]	**m**:reed	159;**j**1282;**m**990
P. australis (Cavanilles) Trinius *ex* Steudel [**j**:*P. a.* (Cavanilles) Steudel]	**rjm**:common reed	159;**j**1282;**m**990
Poa Linneaus	**rjm**:bluegrass	159;**j**1284;**m**990
P. annua L.	**rj**:annual bluegrass; **m**:wintergrass	159;**j**1287;**m**991
P. palustris L.	**rjm**:fowl bluegrass	159;**j**1288;**m**994
P. scabrella (Thurber) Bentham *ex* Vasey [**j**:*P. secunda* J.S.Presl ssp. *s.*; **k**:*P. secunda* J.S.Presl]	**r**:Malpais bluegrass; **j**:one-sided bluegrass	159;**j**1289;**m**995
Polypogon Desfontaines	**rj**:beard grass; **m**:beardgrass	159;**j**1290;**m**995
P. interruptus HBK. [**k**:*P. i.* Kunth]	**j**:ditch beard grass	159;**j**1290;**m**996
P. monspeliensis (L.) Desfontaines	**j**:annual beard grass	159;**j**1290;**m**996

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[199] Authority in **j** corrected (see *The Jepson Globe* vol. 9 no. 1 1998).

[200] Synonym not given in **jm**, and differing slightly in **k**: *Paspalum paspalodes* Michaux.

[201] Authority in **j** corrected (see *The Jepson Globe* vol. 9 no. 1 1998).

scientific name(s)	common name(s)	reference pages
Poaceae (cont.)		
Schismus Palisot de Beauvois	j:Mediterranean grass	159;j1293;m997
S. barbatus (L.) Thellung [**k**:*S. b.* (Loefling *ex* L.) Thellung]		159;j1293;m997
Setaria Palisot de Beauvois	m:bristlegrass	159;j1294;m998
S. geniculata (Lamarck) Palisot de Beauvois (misapplied) [**jk**:*S. gracilis* Kunth]	r:knotroot bristlegrass	159;j1296;m998
S. lutescens (Weigel) F.T.Hubbard [**j**:*S. pumila* (Poiret) Roemer & J.A.Schultes; **k**:*S. glauca* (L.) Palisot de Beauvois][202]		160;j1296;m999
Sorghum Moench		160;j1296;m1000
S. halapense (L.) Persoon	rm:Johnsongrass; j:Johnsongrass	160;j1296;m1000
Sporobolus R.Brown	jm:dropseed; j:sacaton	160;j1297;m1001
S. indicus (L.) R.Brown [**m**:*S. poiretii* (Roemer & Schultes) A.Hitchcock (misapplied)]	j:smutgrass	160;j1298;m1002
Stenotaphrum Trinius	m:Saint Augustine grass	160;j1298;m1002
S. secundatum (Walter) Kuntze [**k**:*S. s.* Kuntze]	rj:Saint Augustine grass	160;j1298;m1002
Stipa Linnaeus[203] (part) [**j**:*Achnatherum* Palisot de Beauvois, and **jk**: *Nassella* (Trinius) Desvaux]	rm:needlegrass; m:speargrass	160;j--;m1002
S. cernua Stebbins & A.Löve [**jk**:*Nassella c.* (Stebbins & A.Löve) Barkworth]	j:nodding needlegrass	160;j1276;m1004
S. coronata Thurber [**j**:*Achnatherum coronatum* (Thurber; **k**: *S. c.* Thurber var. *c.*]		160;j1226;m1004
S. lepida A.S.Hitchcock [**jk**:*Nassella l.* (A.S.Hitchcock) Barkworth]	j:foothill needlegrass	160;j1276;m1004
S. pulchra A.S.Hitchcock [**jk**:*Nassella p.* (A.S.Hitchcock) Barkworth]	j:purple needlegrass	160;j1276;m1005
Triticum Linnaeus[204]		160;j----;m1006
T. aestivum L.	rm:wheat	160;j----;m1007
Vulpia K.C.Gmelin [**m**:*Festuca* L. (part)]		160;j1302;m971
V. megalura (Nuttall) Rydberg [**j**:*V. myuros* (L.) K.C.Gmelin var. *hirsuta* Hackel[205]; **m**:*Festuca megalura* Nuttall (part); **k**:*V. myuros* K.C.Gmelin (part)]	rm:foxtail fescue	161;j1302;m972
V. microstachys (Nuttall) Bentham var. *ciliata* (Beal) Lonard & Gould; **m**:*Festuca microstachys* Nuttall (part); **jk**:*V. m.* (Nuttall) Munro var. *c.* (Beal) Lonard & Gould][206]		161;j1302;m972
V. myuros (L.) Rydberg var. *m.* [**m**:*Festuca m.* L. (part); **k**:*V. myuros* K.C.Gmelin (part)]	r:rat-tail fescue	161;j1302;m972
V. octoflora (Walter) Rydberg var. ?[207]	r:sixweeks fescue	161;j1302;

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[202] *Setaria lutescens* and *S. glauca* treated as synonyms of *S. pumila* in **j**, while **m** treats *S. g.* as a synonym of *S. l.*

[203] Ours segregated among *Achnatherum* and *Nassella* in j. *Nassella*, but not *Achnatherum* is included in **k**.

[204] Not included in **j**.

[205] This and the nominate variety, treated as separate species in **r** are synonymous in **k**, hence *V. megalura* is only part of *V. myuros*, namely, var. *hirsuta*. Subspecies authority in **j** corrected (see *The Jepson Globe* vol. 9 no. 1 1998). Indicated native species in **rm**, and alien in **j**.

[206] Authority for species in **j** corrected (see *The Jepson Globe* vol. 9 no. 1 1998).

[207] Based on distribution in **j**, either the nominate variety and/or var. *hirtella* (Piper) Henrard are anticipated.

scientific name(s)	common name(s)	reference pages
Poaceae *Vulpia* (cont.)		
V. pacifica Rydberg[208] [**j**:*V. microstachys* (Nuttall) Munro var. *pauciflora* (Beal) Lonard & Gould; **m**:*Festuca p.* Piper; **jk**:*V. m.* (Nuttall) Munro var. *p.* (Scribner *ex* Beal) Lonard & Gould]		161;j1302;m973
V. reflexa (Buckley) Rydberg [**j**:*V. microstachys* (Nuttall) Munro var. *pauciflora* (Beal) Lonard & Gould; **m**:*Festuca r.* Buckley; **jk**:*V. m.* (Nuttall) Munro var. p. (Scribner *ex* Beal) Lonard & Gould]		161;j1302;m973
Potamogetonaceae Reichenbach	jm:pondweed family	161;j1304;m1007
Potamogeton Linnaeus	rjm:pondweed	161;j1304;m1007
P. crispus L.	j:crispate-leaved pondweed	161;j1305;m1008
P. pectinatus L.	r:Sego pondweed; j:fennel-leaf pondweed	161;j1306;m1009
Ruppiaceae Horaninow [jm:Potamogetonaceae (part)]		161;j1304;1007
Ruppia Linnaeus	rjm:ditch-grass	161;j1306;m1009
R. maritima L.		161;j1308;m1011
Typhaceae Jussieu	rm:cat-tail family; j:cattail family	162;j1308;m1012
Typha Linnaeus	rm:cat-tail; j:cattail	162;j1309;m1012
T. domingensis Persoon	j:southern cattail	162;j1309;m1012
T. latifolia L.	r:soft-flag; j:broad-leaved cattail	162;j1310;m1012
Zannichelliaceae Chevallier	jm:horned-pondweed family	162;j1310;m1013
Zannichellia Linneaus	r:grass-wrack; j:horned-pondweed; m:horned pondweed	162;j1310;m1013
Z. palustris L.		162;j1310;m1013
Zosteraceae Dumortier	r:eelgrass family; jm:eel-grass family	162;j1310;m1013
Phyllospadix Hooker	rjm:surf-grass	162;j1310;m1015
P. scouleri Hooker		162;j1310;m1015
P. torreyi S.Watson		162;j1310;m1015
Zostera Linnaeus	rjm:eel-grass	162;j1310;m1015
Z. marina L. [**k**:*Z. m.* var. *m.*]		162;j1312;m1015

ACKNOWLEDGMENTS

Sincere thanks to Envicom Corporation for providing financial support, materials and equipment during the research and production of this work. The Friends of the Jepson Herbarium courteously provided all corrections to The Jepson manual published in *The Jepson Globe* through vol. 9 no. 1 (1998). A number of amateur botanists, and professional and academic colleagues have expressed their interest in the completed checklist, without which, the present work might never have been completed.

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[208] *Vulpia pacifica* Piper given in **j** as an older synonym, differing slightly in **k** *V p.* (Piper) Rydberg. Thus and the next species (*V. reflexa*) are reduced to synonymy under *V. microstachys* var. *pauciflora* in **jk**.

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CROSSOSOMA

Journal of the Southern California Botanists, Inc.

Volume 23, Number 2 Autumn–Winter 1997

CONTENTS

Notes from the Editor 65

British plants in Southern California [1891 — an overlooked early paper by *Dr. Anstruther Davidson*] 68

The Los Angeles Coastal Prairie, a Vanished Community. — *Rudi Mattoni & Travis R. Longcore* 71

Research progress report. — *Darin L. Banks* 103

Reviewers for *Crossosoma* Vols. 22 and 23. 107

Dates of issue for *Crossosoma* Vols. 18 to 23. 108

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NOTES FROM THE EDITOR . . .

I am profoundly satisfied to announce that **Carl Wishner has nobly, courageously stepped forward to contribute his time and talents to the Southern California Botanists in the role of *CROSSOSOMA* Editor**. Carl's field expertise centers on the Santa Monica Mountains, Santa Susana Mountains, and Simi Hills of Los Angeles and Ventura counties, but certainly extends beyond this area. I am looking forward to his contributions, and am expecting him to take the SCB journal to its next level of development. As an author, he contributed the *Flora of the Santa Monica Mountains: Synonymized Checklist and Index*, which appeared in our last issue. It is a useful reference in its own right, but also forms an important first step toward the compilation and publishing of a revised flora for the range.

Carl is already hard at work pulling together material for Volume 24. If I may make a final request in my role as Editor, *it is this*: Please provide your *new* Editor with positive moral support in what can sometimes be a stimulating and rewarding endeavor, but can just as often be a thankless, seemingly Sisyphean task. When Carl is finally ready to pass on the torch to still another editor (and may it not be anytime soon), I hope that he will be able to look back on his experience in this position with satisfaction and fond memories.

NEW EDITOR'S ADDRESS:

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As the most recent Editor for *CROSSOSOMA*, I tried to encourage and court submissions from various botanists—friends, colleagues, or merely casual acquaintances—who were conducting studies which might be of particular interest to botanists working in Southern California and/or Baja California, Mexico. Several Notes, Noteworthy Collections, Florulas, and Articles were informally promised, but during the last couple of years few of these have materialized. There were a few times when I wondered whether I could publish an issue of *CROSSOSOMA* with 50 blank pages, and get away with it. Nevertheless, I believe that sufficient precedent has been established so that we *will* in fact see more articles and notes contributed to the journal. When I accepted the position of Editor, I felt *very strongly* that we needed to "prime the pump," *i.e.*, acquire and publish a few important articles which would normally be submitted to, and published by, other journals. By doing so, we could illustrate and encourage contributions of similar content and/or quality. [I half-heartedly apologize to those young and/or urban SCB members who have never had to "prime" a manual water pump, and cannot therefore understand the metaphor.] I am confident that the pump—having now been primed—is beginning to flow at a reasonable rate. Don't merely stand by and watch the flow return to a dribble. *Nobody* likes a dribble....

I *know* that Carl Wishner will appreciate receiving manuscripts and notes to consider for publication in our journal. The last thing in the world that "we" want is to have each issue of *CROSSOSOMA* essentially written by the Editor himself. [Here, "we" equals the immediate past Editor, and the new Editor.] If the results of your research are appropriate to the mission and membership of the SCB, then please consider submitting your results to *CROSSOSOMA* for publication. Then, please be patient with your new Editor, and support him in any way that you can. The SCB can only grow with your contributions.

Although it has been about 34 months, I have lived a lifetime during my tenure as Editor of CROSSOSOMA (Volumes 22 and 23). Though it was unforeseeable, it is still quite regrettable that only about a month after accepting the position of Editor, I was finally pushed beyond reasonable limits in my professional job and consequently burnt out *quite thoroughly*. One of the results was a plummet into profound and protracted clinical depression. [I apologize here to those who live in a Walt Disney world and do not like to acknowledge the existence of anything remotely negative.] Unlike obligations which have been *forced* upon me by others, I undertook the Editorship of CROSSOSOMA voluntarily, in the hope of helping the SCB and its journal to progress. I take all my obligations seriously—but those which I have personally put myself under correlate directly with my personal integrity. As such, I have tried to compile, edit, and produce issues of CROSSOSOMA which I can be reasonably proud of, and which can potentially edify at least some members of the SCB.

The last two years (going on three...) have probably been the most difficult and miserable years of my life. *Fortunately*, I am about to be reincarnated.

In the meantime, I would certainly like to apologize to any and all who have been inconvenienced and/or frustrated by the delays in publication of CROSSOSOMA. For those contributors, reviewers, and SCB members who knew what was going on "behind the scenes" and were able to work patiently with me—*I sincerely appreciate it*. For those who finally lost their patience with me, believe me—*I can sympathize*. I hope, however, that the few issues of CROSSOSOMA which I leave behind (—typos and all—) have at least imparted to the SCB membership a general sense of the directions that the journal can go in its continued development.

In my role as Editor, I found it necessary to reject a couple of lengthy articles based on the recommendations of the reviewers. I apologize to those contributors; at the same time I would mention that a lengthy "Note" which I recently submitted to MADROÑO was essentially "rejected." *However*, I acknowledge that the comments made by *my* reviewers were predominantly objective, legitimate, and constructive, and I intend to re-approach the subject which was addressed in that "Note" with full and respectful consideration of those points which the reviewers felt needed to be addressed. The review process is an *important* and *integral* part of publishing sound and worthwhile articles and notes. I hope that SCB members will keep this in mind when submitting material for publication, and will not take it personally if, perchance, the reviewers "really bloody-up" your paper, or suggest that it essentially be re-written prior to acceptance. At the same time, I strongly encourage SCB members to submit notes and observations, no matter how brief, no matter how informal, which may be of interest or benefit to other members of the SCB.

It seems to have become clear over the last couple of years that I was perhaps too idealistic, too deliberate, and too slow for the role of Editor. However, I cannot apologize for being idealistic. I continue to believe that—*if* the SCB and CROSSOSOMA are to progress and contribute substantially toward fulfilling the mission of the SCB—a higher standard must be established and adhered to. The commitment of the SCB membership, and of the SCB Board of Directors, will be crucial in this endeavor. To those SCB members who have shown appreciation for my efforts, and who have been patient with the publication delays, I can only offer a warm and sincere "*Thank You*" for your understanding and support.

As a personal update—my wife Annette, who had been compiling the newsletter *Leaflets* for the SCB, relinquished that position in early 1998 in preparation for a move to Washington state. Compilation of *Leaflets* was then taken over by Steve Boyd, although I don't know whether that change was ever reflected in the newsletter. Annette moved to Washington in early May, while I remained behind to sell our house and finish up my obligations for CROSSOSOMA. With the house sold, and this issue *finally* coming off the press, I am greatly looking forward to joining Annette and our two faithful canids, Zeca & Charlie, up in the Pacific Northwest. I am going to miss the unique flora of Southern California, but *I am not going to be leaving it behind*. If anything, I am looking forward to gradually broadening my botanical horizons and, hopefully, gaining a better overall understanding and appreciation for the boreal element in the flora of the Pacific States. Annette and I will, of course, remain members of the Southern California Botanists Inc. [Based on the current SCB mailing list, it looks like we'll be the first members in the state of Washington.] I hope that friends and botanical colleagues will send reprints to help keep us apprised of novelties and continued advances in our knowledge of the local flora. [Reprints related to the geology or entomology of the Pacific States, or Baja California, also gladly accepted!] Undoubtedly I will have to sneak back to Southern California from time to time if I am to continue working on the L.A. County checklist. Such visits should *also* allow me to collect seeds of some of my favorite montane plants for cultivation in our new Washington garden (*i.e.*, taxa which didn't like the summer heat in Ontario, but which should be quite content in the southwestern part of Washington state).

Annette and I can receive snail-mail (hopefully only good news) at the following address: Tim & Annette Ross, 6829 Prairie Ridge Drive N.E., Olympia, Washington 98516. I am fortunate in having been accepted as a Herbarium Research Associate with the Herbarium (OSC) of Oregon State University, Corvallis. This provides me with—among other things—an institution where I may receive loans of herbarium specimens for study. I still do not know what I will be doing professionally (*i.e.*, for a paycheck), but I will definitely be doing field botany whenever I can: it remains my first love. It is with a smile that I once again remember a quote from my mother when I was still in high school back in Michigan: "Plants are nice as an *avocation*, but you really need to start thinking seriously about a *career*." All things considered, I think that I've been fairly lucky.

Before signing off, I want to extend my deepest thanks to J. Travis Columbus and Sandra Columbus, and also to Victor W. Steinmann and Ivonne Moscosa, for providing food, shelter, and company to me while I remained in Southern California to finish *CROSSOSOMA*. I hope that I can someday repay the debt.

My editorial servitude thus coming to a close, *les digo "¡Adios! ¡Y que tengan muy buena suerte!"*

—Timothy S. Ross

Ontario,
Claremont,
Pomona, California; *October 1998* ...

(... with a few "final" stops in the San Gabriel Mtns, Liebre Mtns, Topatopa Mtns, Santa Monica Mtns, Santa Ynez Mtns, Santa Lucia Mtns, *etc.* ...on my way North....)

[NOTE PREFATORY TO ANSTRUTHER DAVIDSON'S ARTICLE. — In early September of this year, Beatrice Beck, Librarian at the Rancho Santa Ana Botanic Garden in Claremont, mentioned to me that she had stumbled upon what appeared to be a previously unknown article by Dr. Anstruther Davidson [1]. A couple of days later, she furnished me with a photocopy of the article and thought that it might be of sufficient interest to merit a reprinting—a thought with which I concur. Davidson, along with Dr. H.E. Hasse [2] of Soldier's Home, Santa Monica, and Alfred J. McClatchie [3] of Pasadena, were apparently Los Angeles County's first resident botanists to begin describing their own botanical novelties. Early in his botanical excursions, Davidson collected plants and made observations in the vicinity of Los Angeles, the Los Angeles Basin, and then the San Gabriel Mountains. Some of these excursions were conducted in the company of Dr. Hasse—Davidson focusing on vascular plants, and Hasse focusing largely on nonvascular plants. At about the same time Samuel B. Parish [4], a resident of San Bernardino, was exploring the San Bernardino Valley and predominantly adjacent mountains and desert to the north. Together, Parish and Davidson were instrumental in the early exploration of the central and eastern Transverse Ranges, and described or first collected many of the locally distributed vascular plant species which are familiar to us today.

Though relatively brief and informally written, the article which follows provides Dr. Anstruther Davidson's observations on some of our non-native species already reasonably familiar to him from his homeland, and already established in the vicinity of Los Angeles, from the perspective of a recent immigrant with botanical interests. The species mentioned will already be known to most of you, but the historical perspective should be of interest, particularly to those who regularly conduct botanical excursions, fieldwork, or studies around the L.A. Basin.

In only a few cases I have inserted, in brackets, items intended for clarification. Slightly longer items, such as alternate or more recent nomenclature, or where an explanation is potentially warranted, I have relegated to endnotes to avoid unnecessarily obtrusive information within the body of the text. — T.S. Ross, Ed.]

BRITISH PLANTS IN SOUTHERN CALIFORNIA

DR. ANSTRUTHER DAVIDSON
Los Angeles.

[Reprinted from:] 1891. *The Transactions and Journal of Proceedings of the Dumfriesshire and Galloway Natural History and Antiquarian Society*, Session 1890–91, No. 7: 112–115. Courier and Herald Offices, Dumfries, Scotland.

When the writer of this touched Los Angeles, a stranger in a strange land, and began to examine its botanical wonders, amidst its varied and perplexing semitropic flora, it was cheering to find that, among the inanimate waifs of cultivation, many were old friends in changed but mostly improved circumstances.

With plants as with man changes seem to follow their migration, so that one can scarcely recognise them in their altered appearance. These variations alone would make an interesting paper, but at present I will confine myself to the communication of the different species of British plants here naturalised.

The native flora is somewhat semitropical in character. The dry warm summers parch the ground, wither up the grasses and annuals, and intensify the general sterile appearance of the whole country. With the advent of the winter rains all this is changed. In a few days the hills show green with a carpet of clover (*Alfiluree*) and flowers rather than of grass; the latter, though in many places abundant, cannot be considered a feature of the indigenous flora.

Among the first to appear are *Brassica nigra* and *B. campestris* [5]. The former species is one of the greatest pests of cultivation, and more detrimental to growing crops here than its better known relative *Sinapis arvensis* [6] (wild mustard) is to those of the British farmer. In the moist lands and grain fields, where it has secured a foothold, it grows most luxuriantly to a height of four to eight feet or more, with stems as thick as a walking cane, and forming with its interlacing branches thickets as impenetrable as brushwood. Popularly it is said to have been introduced at an early date by the Spanish monks. Whether this is really so or not I cannot authenticate, as the expression itself is very much akin to that of "came over with the Conqueror," and is subject, I fear, to like abuse. However introduced, its natural fertility, aided by the blackbirds and finches, has spread it over the length and breadth of the country.

The plantain [7], "the white man's foot," as the Indian calls it, is but casually represented, but that more typical representative of civilisation, the shepherd's purse, *Capsella bursa-pastoris*, is here in abundance. In Britain one is too apt to forget that it is an introduction there, having followed civilisation from the Mediterranean shores, and it seems but fitting it should continue the Saxon's march in the peaceful settlement of the Western Continent. The common water cress, *Nasturtium officinale*, and candytuft, *Iberis amara* [8], escaped from cultivation are well established. The medicks are represented by *M[edicago] denticulata* [9] and *M. sativa* (*Lucerne*, or *Alfalfa*, as it is here called), and are two of the most valuable fodder plants in California. *M. denticulata*, or burr clover, has by natural processes spread over the greater part of the lower country, and not only affords maintenance to stock in its green state, but also when matured its ripe burrs being greedily eaten by horses and sheep as they lie round the withered remains of the parent stem. It has one serious drawback, however: its burrs are the processes for perpetuation of the species, and in their attempts to spread themselves they get inextricably mixed among the coats of horses and sheep, and nothing short of removing the hair or fleece will suffice to clear them. *Lucerne*, the *Alfalfa* of Californians, is sown down like grass on somewhat moist land, and under the genial influence of the western sun it grows luxuriantly. The crop, usually knee deep, is cut from five to seven times a year, and converted into hay. Once properly rooted it never requires re-sowing, and as proof of this it is authoritatively stated that one of the fields sown by one of the early Spaniards has yielded five or six crops annually ever since and the last apparently as good as any. Along with these *Melilotus parviflora* [10] grows in fair abundance, and is also useful for fodder purposes. Of native clovers there are over thirty varieties, some of which seem very valuable. So far the only British species observed is *Trifolium arvense* (white clover), and only as a casual among imported grasses. Of the *Caryophyllaceae*, *Silene gallica*, *Cerastium triviale* [11], and *Stellaria media* are sparsely represented. Only a few of the *Compositae* are represented; *Anthemis cotula* and *Silybum marianum* are not uncommon. *Taraxacum officinale* (dandelion) is merely a casual, and even where introduced seems to struggle for its bare existence. The sow thistles (*Sonchus oleraceus*) and *S. asper* are common in the waste grounds around the city lots, and contrary to general experience, both seem alike common. The genuine Scotch thistle [12] has not yet arrived, probably because no Scotsman has been patriotic enough to introduce it. The native thistles are quite as unpleasant as they are generally made, but for some reason they seem very limited in numbers. I think, however, of all the introduced weeds *Malva borealis* [13], or the northern mallow, "takes the cake." Over the wastes, orchards, and cultivated grounds it is more or less prevalent, and where unmolested attains a height sometimes of 6 feet. Once established it is not easily eradicated, as it grows and matures fruit throughout the greater part of a season. The pretty storks bill, *Erodium cicutarium* and *E. moschatum*, known here by the Spanish name of *Alfilaree*, supply along with the burr clover the principal grazing in the earlier summer. In cultivated ground along the valleys and mesa or tablelands, it literally covers the ground in many parts. Though probably introduced by accident, its extensive distribution is mainly due to artificial means, and once introduced its natural fertility ensures its survival and increase. Horehound (*Marrubium vulgare*) is an importation of doubtful utility and extensive range. In many places it covers acres of ground, crowding out the natural flora. The bees alone seem to profit by its abundance, but the honey so produced is in some places so characteristic as to taste bitter and unpalatable. *Chenopodium album* [14], and *Atriplex patula*, known here as pig weed, are fairly abundant. The grasses foreign to the country have been mostly introduced either for lawns or agricultural purposes. These include *Poa pratensis*, *Dactylis glomerata*, *Lolium perenne*, and among the casuals may be mentioned *Poa annua*, *Lolium temulentum*, and *Eragrostis poaeoides* [15].

Endnotes:

[1] Anstruther Davidson: born 19 Feb. 1860, Caithness, Scotland; died 3 April 1932, Los Angeles. His primary set of collections, including types of taxa which he described, was originally housed at the Los Angeles Museum of Natural History (LAM), but now resides at RSA

[2] Hermann Edward Hasse: born 12 Jan. 1836, Freiburg, Sachsen; died 29 Oct. 1915, Santa Monica. He was Southern California's foremost lichenologist.

[3] Alfred James McClatchie: born 1861; died 1906. Apparently specifics of his birth and death are unverified, although his personal herbarium (which undoubtedly contains many interesting historical collections from our area) was acquired by the New York Botanical Garden (NY) upon his death.

[4] Samuel Bonsall Parish: born 13 Jan. 1838, Paterson, New Jersey; died 5 June 1928, Berkeley.

[5] = *Brassica rapa* L. ssp. *sylvestris* (L.) Janchen.

[6] = *Brassica kaber* (DC.) Wheeler.

[7] "The plantain." This is somewhat ambiguous and may refer to either *Plantago major* L. or *P. lanceolata* L. In Davidson's *Catalogue of the plants of Los Angeles County* (1896) the former is cited as "On low grounds, not common," while the latter is cited as "Streets of Los Angeles and Pasadena." This suggests that *P. lanceolata* tended to occur in the more disturbed habitats; however, while Davidson used the common name "plantain" for all six *Plantago* taxa on his list, he had also provided "Ribgrass" as the common name for *P. lanceolata*. Consequently, I cannot be certain of the application.

[8] "...candytuft, *Iberis amara*..." *Iberis* is not reflected in Davidson's *Catalogue* (1896) and—while it has been popular as a garden plant—is not known to have weedy tendencies in Southern California. My suspicion is that this reference was a misidentification for "Sweet Alyssum," *Lobularia maritima*, which is listed in Davidson's *Catalogue* as "Occasional, casual."

[9] = *Medicago polymorpha* L.

[10] = *Melilotus indicus* (L.) Allioni.

[11] This appears to represent *Cerastium vulgatum* L.

[12] Scotch thistle = *Onopordum acanthium* L.

[13] Although *Malva borealis*—as used by early Californian authors—generally referred to *M. nicaeensis* Allioni, its use here appears to have been a misapplication for *M. parviflora* L., the only true *Malva* listed by Davidson in his *Catalogue*; or, it may have been unintentionally applied to more than one of the often similar appearing non-native *Malva* species which have been established in the L.A. Basin.

[14] *Chenopodium album* L., putatively a native of Europe, is not as common in the Los Angeles Basin as some floristic references would suggest. While it certainly occurs here, many of the early collections from the Basin have been re-identified as the somewhat similar-appearing *Ch. murale* L., putatively another European native.

[15] *Eragrostis poaeoides*, a species adventive from Europe, is not reflected in Davidson's *Catalogue* (1896), and was probably a misidentification for *E. mexicana* (Hornem.) Link, which Davidson cites (1896) as "Along streets in Los Angeles and Pasadena."

THE LOS ANGELES COASTAL PRAIRIE, A VANISHED COMMUNITY

RUDI MATTONI and TRAVIS R. LONGCORE
UCLA Department of Geography
Box 951524
Los Angeles, California 90095-1524
(310) 825-1071

ABSTRACT: The Los Angeles coastal prairie was an herbaceous plant community with high concentrations of annual forbs, similar to coastal prairie described for northern California, interspersed with a network of vernal pools with their associated specialized flora. Unfortunately, the unique community was lost before it could be studied in detail The prairie covered about 95 km^2 of coastal Los Angeles County, extending north-south from the crest of the Ballona Bluffs to the Palos Verdes peninsula and inland for 3–7 km from the lee of the El Segundo sand dunes. We present (1) historical accounts and photographs of the prairie, (2) a description of the vegetation, including a list of plants native to the prairie assembled from herbarium accessions, botanical literature, and recent surveys of a highly degraded 12-ha fragment, and (3) a review of the mammals, birds, reptiles, and amphibians that were once found on the prairie. The description of the Los Angeles coastal prairie and its vernal pools should inform restoration efforts in the area, and aid in the potential identification of previously overlooked fragments of these habitats in the urban mosaic.

KEY WORDS. California, coastal prairie, Los Angeles, restoration, vegetation, vernal pools.

Introduction

The Los Angeles coastal prairie was a predominantly herbaceous plant community with extensive vernal pool habitat that covered about 95 km^2. The last significant remnant, a 120-ha site at the west end of the Los Angeles International Airport (LAX), was obliterated in the late 1960s. Today a few scattered open patches remain, but these are so degraded and overgrown with exotic weeds as to be unrecognizable as coastal prairie. One remnant, 12 ha at LAX, was the site of an attempt to restore a portion of this unique community. Our purpose in this paper is to reconstruct this ecological community from historical information, including voucher specimens, biological field notes, photographs, and anecdotal material. This description should allow those attempting ecological restoration within the former extent of the prairie to use appropriate native plants in their efforts. This objective is timely because restoration projects across the Los Angeles basin often attempt restoration using plants never found in an area or neglect to restore the diversity of plants that were present. Such well-meaning but inappropriate plant choices create insidiously harmful effects on animal communities (Longcore et al. 1997), and may confuse future analysts who will be required to reconcile alien species and ecotypes.

The extent of the Los Angeles coastal prairie (Figure 1) was congruent with the Pleistocene dune system delineated by Cooper (1967) during his comprehensive review of the coastal sand dunes of California (Mattoni 1993). The Pleistocene dune system coincides almost exactly with the Oakley Sand formation depicted by the U. S. Bureau of Soils survey (Nelson 1919). The prairie was underlain by this edaphic formation, characterized by the consolidated sands of the Pleistocene sand dunes at El Segundo. The older system was formed during the 80,000 years before the last glaciation while the newer dunes were formed

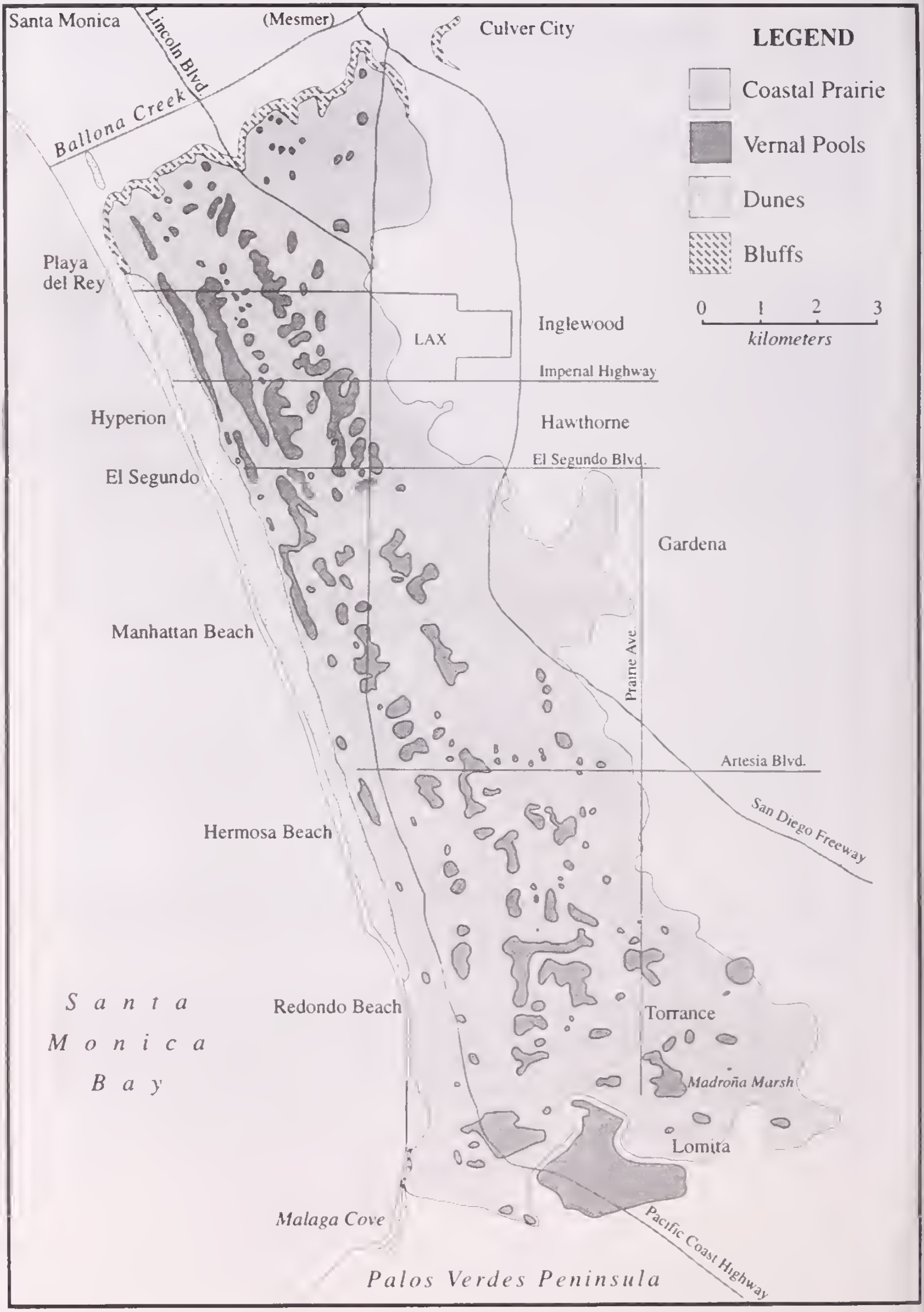
Santa Monica
Lincoln Blvd.
(Mesmer)
Culver City
LEGEND
Coastal Prairie
Vernal Pools
Dunes
Bluffs
0
1
2
3
kilometers
Ballona Creek
Playa del Rey
LAX
Inglewood
Imperial Highway
Hyperion
Hawthorne
El Segundo Blvd.
El Segundo
Gardena
Manhattan Beach
Prairie Ave.
Artesia Blvd.
San Diego Freeway
Hermosa Beach
Santa Monica Bay
Redondo Beach
Torrance
Madroña Marsh
Lomita
Malaga Cove
Pacific Coast Highway
Palos Verdes Peninsula

Figure 1 (opposite). Map of the extent of the Los Angeles coastal prairie and its vernal pools. Modern infrastructure is overlain on the historic features. Historic collection localities are given, names not in current usage are given in parentheses. After Cooper (1967).

over the past 6,000–8,000 years. The enormous amounts of sand that form both dune systems were provided by alluvium transported by Ballona Creek, which was fed by the Los Angeles River until the 1800s.

The Los Angeles coastal prairie was surrounded by vegetation types associated with different edaphic, hydrologic, and topographic features. The western edge of the Los Angeles coastal prairie was formed by the active El Segundo sand dunes along the immediate coast, which were covered with dune scrub. The eastern and southern boundaries are hypothetical as no remaining vestiges of the native biota exist. Soil types along the south border, at the Palos Verdes uplift, are sedimentary sandstones vegetated by a typical coastal sage scrubland of *Artemisia californica* and admixtures of other shrubs. Portions of these scrub communities still exist on the Palos Verdes peninsula, but not in the border areas of the prairie. The southern and eastern borders included extensive wetlands including Bixby Slough and "Nigger Slough."[1] The highly degraded Madroña Marsh is a small extant remnant of these wetlands. The remaining border of the prairie was probably entirely coastal sage scrub and coastal bluff scrub, extending north from the marshes in the Torrance area to the Ballona Gap and west to the Pacific across the top of the Ballona Bluffs.

Historical Description: "Where once grew wild flowers with abandon"

Although the Los Angeles Coastal Prairie has been overlooked as a distinct association in recent years except by Mattoni (1993), lay people have recognized the unique character of this area. The "plains" rolling to the sea are described in many travelers' accounts of early Los Angeles (*e.g.*, Brewer 1930). Historian Roy Rosenberg (1938) writes that the prairie was converted from ranching to dry farming in the 1800s by the founder of Inglewood, California, Daniel Freeman. Rosenberg reports characteristics of the prairie at that time;

> [I]t is recorded that the Freeman children rode over the rancho through fields of wildflowers that extended to the Pacific. The sight of these great fields, suddenly confronting a person as he neared the top of Baldwin Hills, brought as enthusiastic exclamations of surprise and wonder from his lips as does the present panorama which greets the traveler as he speeds over ribbons of concrete enroute from the metropolitan district to Inglewood. Where once grew wild flowers with abandon — poppies, lupin, mustard, horseradish and verbena — there now appears a sea of lights which that great raconteur, Alexander Wolcott, has aptly likened to "the babel of a million tungstens" (Rosenberg 1938:12–13).

A Manhattan Beach resident wrote as follows of his childhood in the 1920s;

> While living at 3116 Alma, we almost always walked to school. We walked over the sanddunes, through the area where Grandview School is located, across the fields, over the railroad tracks, past the Catholic Church property.

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[1] We use this offensive place name with regret and have abbreviated it to "N. Slough" throughout the remainder of the paper. Most local botanists are aware of this locality between Gardena and Torrance because of its frequent occurrence on herbarium labels on specimens from the early 1900s. It has no modern place name because it has long since been drained and filled. The wetland was reportedly named after the freemen who farmed near it and the name appears on historic maps of the area (Nelson 1919). We hope that the reader understands our decision to identify the locale by its only name.

[illegible] mosquitos at [illegible] my cold.

The meadow slope

Lupinus chamissonis Eriogonum

meadow

Eriogonum

Linaria

galls on Ericameria

note egg on lupines

> Quite often we would pick wild flowers like Lupins, Indian Paint Brush, and mustard flower, which grew everywhere, to take to our teachers (Dow 1976:27).

Although some of the flowers listed by Dow and Rosenberg are exotic weeds (*e.g.*, horseradish, probably ***Raphanus sativus***, and mustard, probably ***Brassica nigra***), it is apparent that the area was not coastal sage scrub as it is often described. Additional historical information is provided by Dorothy Lyndes, who lived in Inglewood in the 1930s and still recalls from that time yearly wildflower trips by the Girl Scouts to admire the poppies and lupines in fields to the west (Lyndes *pers. comm.* 1996). And, although the prairie is now largely gone, a namesake, Prairie Avenue, remains.

Botanists and biologists also have described the Los Angeles coastal prairie as a distinct region in various ways. The U. S. Bureau of Soils (Nelson 1919:29) described the native vegetation of the Oakley series as "Some grass and small scrubby brush." Pierce (1938), in his extensive studies of the flora and fauna of the El Segundo dunes, distinguished the "meadow" from the dunes. In his field notes and publications, he delineated specifically between plants of the meadow and plants of the dunes (Figure 2, Pierce 1938; Pierce 1938–1939). In later articles, von Bloeker (1942; 1943a; 1943b) also described the meadow. He wrote, "A large part of the meadow is covered throughout the year by low-growth vegetation, such as grass, weeds, and non-native plants. ... Another section is heavily over-grown with native shrubs. ... In the grassland (including the areas of native and non-native grasses and weeds, and the grain-fields)..." (von Bloeker 1943a:12). These descriptions evoke a landscape that is different from the surrounding dominant coastal sage scrub. Burcham (1957) mapped the whole Los Angles basin as California Prairie. Küchler (1977) created confusion with his map of the potential natural vegetation of California by identifying the active dunes and the area underlain by consolidated dunes as "Southern Seashore Communities," which included "Southern beach community" and "Southern dune scrub." The observation that the area of the prairie is different from its surroundings is correct, but the prairie is also distinct from dune scrub. The previous misclassification has caused some difficulties in attempting to restore the appropriate plant community in the area.

Vegetation Description

We have compiled a list of all native vascular plant species known to have occurred on the Los Angeles coastal prairie (Table 1, pp. 77–85). The list was created by inspecting accessions in the UCLA Herbarium and the Rancho Santa Ana Herbarium of all species that could possibly have been found on the prairie. The list of possible species was developed by reviewing historical records, habitat descriptions in Floras of southern California (Abrams 1904; Davidson and Moxley 1923; Munz 1935; Munz 1974), relevant literature (e.g., Beetle 1947; Biswell 1956; Holland and Keil 1995; Keeler-Wolf et al. 1995; Keeley 1989; Munz and Keck 1949; Munz and Keck 1950; Ornduff 1974; Sawyer and Keeler-Wolf 1995; Thorne 1976; Zedler 1987) and through consultation with botanists with a knowledge of the area. Many records are from collections made incidental to surveys of the El Segundo sand dunes by W. Dwight Pierce, O. H. Kappler, and others. Other records are from casual collections by amateur botanists. Because there was no systematic effort to document the flora of this area, it is possible that species not on the list simply were not collected. Nevertheless, from the records documented here, we conclude that the plant species present in this area indicate

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Figure 2 (opposite). Page from W.D. Pierce's notes, with contact strips of photos. The first photograph on the second row is the only picture that shows the "meadow" looking inland from the El Segundo dunes.

Table 1. Native plants of the Los Angeles Coastal Prairie and its vernal pools.

Habitats: **D**, dunes *and* prairie; **P**, prairie (*not* dunes); **V**, vernal pools.

[1] Southern California vernal pool indicator species.

[2] Vernal pool associates, found also in aquatic, marsh, or seepage areas.

[3] Found in vernal pool basins, but common in other habitats (Zedler 1987).

*Species or examples of genera listed by Keeley (1989) as composing pristine native California grasslands.

Lifeforms: **A**, annual, **B**, biennial, **P**, perennial, **S**, shrub.

Nomenclature generally follows *The Jepson Manual* (Hickman 1993); synonomies are given for deviations and to aid in interpretation of historical sources. Relevant text from herbarium labels and literature or references that suggest presence on the prairie are presented.

Scientific Nomenclature	**Common Name**	**Habitat**	**Form**	**Authority**
DICOTYLEDONES				
AIZOACEAE				
Sesuvium verrucosum Raf [*S. sessile* auth., not Pers.]	WESTERN SEA-PURSLANE	V	P	Occasional on the borders of brackish pools from Gardena to Wilmington (Davidson and Moxley 1923). "N. Slough," A. Davidson, June 14, 1891, I. Johnston, April 11, 1917 (RSA).
APIACEAE				
Apiastrum angustifolium Nutt.		P	A	Manhattan Beach, Hills, Effie S. Spaulding, May 3, 1924 (RSA).
Eryngium aristulatum var. *parishii* (J. Coulter & Rose) Jepson	SAN DIEGO BUTTON-CELERY	V[1]	B	Sandy ground, Redondo (Davidson and Moxley 1923).
ASTERACEAE				
Achyrachaena mollis Schauer	BLOW-WIVES	P[3]	A	Cultivated ground west of Los Angeles, A. Davidson, 1930 (RSA).
Ambrosia acanthicarpa Hook.	ANNUAL BUR-SAGE	P	A	Drier slopes (Pierce 1938–1939).
Ambrosia psilostachya DC.	WESTERN RAGWEED	P	P	(Pierce 1938–1939). To edge of dune but not on sandy slopes (Pierce 1938).
Artemisia californica Less.	CALIFORNIA SAGEBRUSH	D	S	Occasional on prairie (Mattoni 1990).
Aster subulatus Michaux var. *parviflorus*	ASTER	V	A	"N. Slough," I. Johnston, April 11, 1917. Moist ground, near Mesmer, LeRoy Abrams, August 24, 1902 (RSA).
Baccharis emoryi A. Gray		V	S	Gardena, "N. Slough," dry bottom of slough, F.R. Fosberg, October 18, 1930 (RSA).
Blennosperma nanum (Hook.) S.F. Blake [*B. californicum*]		V[1]	A	In moist places; not common in southern California. Wilmington, Los Angeles County; Gardena, *McClatchie* (Davidson and Moxley 1923).
Chaenactis glabriuscula DC.	YELLOW PINCUSHION	D*	A	(Pierce 1938–1939). Generally distributed over the dunes and on the meadow (Pierce 1938). Sand Hills and flats, between Del Rey and El Segundo, O.H. Kappler, April 30, 1940 (LA).
Corethrogyne filaginifolia (Hook. & Arn.) Nutt. var. *virgata* (Benth.) A. Gray [*Lessingia f.* (Hook. & Arn.) M.A. Lane var. *f.*, *C. virgata*]	CALIFORNIA-ASTER	D	P	(Pierce 1938–1939). Sparingly distributed over the dunes, common on meadow (Pierce 1938). Waste land, Culver City, Fay A. MacFadden, November 18, 1934 (RSA). El Segundo, A. Davidson, 1930 (RSA). Los Angeles near Soldier's Home, Playa del Rey, Ballona Harbor (Canby 1927).

Encelia californica Nutt.	CALIFORNIA SUNFLOWER	D	S	Occasional on prairie (Mattoni 1990)
Filago californica Nutt.	HERBA IMPIA	D^3	A	Ballona Harbor, LeRoy Abrams, April 1, 1901 (RSA).
Gnaphalium bicolor Bioletti		D	P	(Mattoni 1990).
Gnaphalium californicum DC [*G. decurrens*]		D	A/B	Meadow and dunes (Pierce 1938).
Gnaphalium canescens DC. ssp. *microcephalum* (Nutt.) Stebb. & Keil [*G. m.*]		P	B	(Pierce 1938–1939). (Mattoni 1990). To edge of dune but not on sandy slopes (Pierce 1938).
Gnaphalium palustre Nutt.		V^1	A	Inglewood, L.R. Abrams, April 2, 1901 (RSA). Sink at Inglewood, F.W. Peirson, 1951 (RSA)
Grindelia camporum E. Greene var. *bracteosum* (J. Howell) M.A. Lane	GUMPLANT	P^3	P	Wiseburn, LeRoy Abrams, June, 1901 (RSA). Los Angeles, mesas and open ground west of city, E. Kline, June 9, 1924 (RSA).
Hemizonia fasciculata (DC.) Torrey & A. Gray [*Deinandra f.*]	TARWEED	P^{*3}	A	Hills near Playa del Rey, LeRoy Abrams, 1902 (RSA). Del Rey between sand dunes and salt marsh, just above supralittoral, F.R. Fosberg, June 23, 1930 (RSA). Playa del Rey, F.W. Peirson, 1951 (RSA).
Heterotheca grandiflora Nutt.	TELEGRAPH WEED	D	A/P	(Pierce 1938–1939). In stabilized areas, ravines, at both slope bases, and sparingly on the dunes (Pierce 1938).
Heterotheca villosa (Pursh) Shinn [*Chrysopsis fastigiata* Greene]		D	P	Santa Monica, *Hasse*, Los Angeles, *Davidson* (McClatchie 1899).
Isocoma menziesii (Hook. & Arn.) G. Nesom var. *vernonioides* (Nutt.) G. Nesom [*Haplopappus venetus* (Kunth) S.F. Blake ssp. *vernonioides* (Nutt.) H.M. Hall]	GOLDENBUSH	P	S	Redondo Beach, Palos Verdes cliffs, July 1943 (RSA). Growing as weed in open field, Compton, F.W. Gould, October 26, 1943 (RSA).
Lasthenia californica Lindley	GOLDFIELDS	P^*	A	Vermont and Western, hills north between, Helen Oster, April 27, 1924 (RSA). Playa del Rey, G.B. Grant, May 14, 1904 (RSA)
Lasthenia glabrata Lindley ssp. *coulteri* (A. Gray) Ornd.	COULTER GOLDFIELDS	V^*	A	Salt marsh, Del Rey Hills. In dense patches in old ploughed ground now overgrown, A.M. Johnson, 1934 (LA). Common in saline marshes, especially along the coast (Abrams 1904).
Layia platyglossa (Fischer & C. Meyer) A. Gray	TIDY-TIPS	P^*	A	Frequent in sandy soil, especially along the coast (Abrams 1904). Near "N. Slough," field, I. Johnston, April 11, 1917 (RSA)
Malacothrix saxatilis (Nutt.) Torrey & A. Gray		D	P	Playa del Rey, I. Johnston, June 10, 1910 (RSA)
Micropus californicus Fischer & C. Meyer	SLENDER COTTONWEED	P	A	Santa Monica, F.W. Peirson, April 11, 1951 (RSA). Low hills, Los Angeles, G.L. Moxley, May 9, 1915 (RSA).
Psilocarphus brevissimus Nutt.	WOOLLY-HEADS	V^1	A	Frequent on the plains and hills, especially in exsiccated places (Abrams 1904, Davidson and Moxley 1923). Not uncommon in desiccated pools in the coastal district of Los Angeles County (Parish 1917). Sink at Inglewood, F.W. Peirson, 1951 (RSA). Hills and dry grounds, Los Angeles, H.E. Hasse, July 1890 (RSA).
Psilocarphus tenellus Nutt.		V^1	A	In the coastal subregion, probably not uncommon. Glendale, near Los Angeles, *Braunton* (Davidson and Moxley 1923; Parish 1904)
Rafinesquia californica Nutt.	CALIFORNIA CHICORY	D	A	(Pierce 1938–1939).

Senecio californicus DC.	GROUNDSEL, RAGWORT, BUTTERWEED	D	A	(Pierce 1938–1939). Meadow slope of sand dunes, Playa del Rey to El Segundo, B.C. Templeton, April 10, 1939 (RSA). Culver City, sandy hillside, Frances M. Morey, April 14, 1922 (RSA). Foothills near end of Vermont Ave., Helen M. Aster, April 27, 1924 (RSA). Common in sandy soil in dry places in our interior valleys and foothills, and on the sand-dunes along the seashore (Abrams 1904).
Senecio flaccidus Less. var. *douglasii* (DC.) B. Turner & T. Barkley		D	P	(Pierce 1938–1939).
Stebbinsoseris heterocarpa (Nutt.) Chambers [*Microseris h.* (Nutt.) Chambers]		P	A	Photograph (Pierce 1938–1939).
Stephanomeria exigua Nutt. ssp. *coronaria* (E. Greene) Gottlieb		D	A	On meadow, stabilized areas of foredune, and in dune ravines (Pierce 1938). Swale behind sand dunes, El Segundo, F.R. Fosberg, August 30, 1931 (RSA). On dry mesas, Inglewood, L. Abrams, August 25, 1902 (RSA).
Stephanomeria virgata Benth. [*Ptiloria v.*]		D	A	From meadow onto the dune, only in stabilized areas, especially on seaward side (Pierce 1938). (Pierce 1938–1939). Common on dry ground, especially toward the coast (Abrams 1904)
BORAGINACEAE				
Amsinckia spectabilis Fischer & C. Meyer	FIDDLENECK	D•	A	(Pierce 1938–1939). Common in sandy soil near the coast (Abrams 1904). Redondo Beach, Emily M. Bradford, March 17, 1904 (RSA).
Cryptantha clevelandii E. Greene var. *florosa* I.M. Johnston		D•	A	Hills between Del Rey and El Segundo, open fields, F.R. Fosberg, March 28, 1932 (RSA).
Cryptantha intermedia (A. Gray) E. Greene		P•	A	(Pierce 1938–1939). Open field, Sand Hills and flats, between Del Rey and El Segundo, O.H. Kappler, April 30, 1949 (LA).
Cryptantha muricata (Hook. & Arn.) Nelson & J.F. Macbr.		D•	A	Hills between Del Rey and El Segundo, open fields, F.R. Fosberg, March 28, 1932 (RSA). El Segundo, sand dunes, Robert M. Perkins, April 16, 1936 (RSA).
Heliotropium curassavicum L. var. *oculatum* (A.A. Heller) I.M. Johnston	HELIOTROPE	D	P	Palisades along railroad at foot of bluff, Hollenberg, July 24, 1928 (RSA). Redondo Beach, sandy fields south end of town around sea level, Tom Burch, June, 1940 (RSA).
Pectocarya linearis (Ruiz Lopez & Pavon) DC. ssp. *ferocula* (I.M. Johnston) Thorne		P	A	Inglewood, LeRoy Abrams, April, 1899 (RSA).
Plagiobothrys canescens Benth.	POPCORNFLOWER	P•	A	Frequent on grassy foothills and mesas (Davidson and Moxley 1923).
Plagiobothrys nothofulvus (A. Gray) A. Gray	POPCORNFLOWER	P•	A	Frequent on rather moist grassy hillsides about Los Angeles and on mesas in the coast region (Abrams 1904). Frequent on grassy foothills and mesas (Davidson and Moxley 1923)
Plagiobothrys trachycarpus (A. Gray) I.M. Johnston [*Allocarya t.* Greene]	POPCORNFLOWER	V•	A	In moist ground near Inglewood (Abrams 1903).
BRASSICACEAE				
Descurainia pinnata (Walter) Britton	TANSY MUSTARD	D	A	(Mattoni 1990).
Erysimum insulare E. Greene ssp. *suffrutescens* (Abrams) R. A. Price [*E. angustata* auth. unknown, *E. s.* Abrams]	SUFFRUTESCENT WALLFLOWER	D	P	(Mattoni 1990). Sand Hills and flats, between Del Rey and El Segundo, O.H. Kappler, April 30, 1949 (LA).
Hymenolobus procumbens [*Hutchinsia p.* (L.) Desv.]		V	A	Redondo, A. Davidson, March, 1894 (RSA).

Lepidium dictyotum A. Gray [*L. acutidens Howell*]	PEPPERGRASS	V	A	In saline places toward the coast. Cienega; Santa Monica (Abrams 1904). Occasional in alkaline soils on the coastal plains (Davidson and Moxley 1923).
Lepidium lasiocarpum Torrey & A. Gray	PEPPERGRASS	D	A	Occasional on prairie (Mattoni 1990).
Lepidium latipes Hook.	PEPPERGRASS	V^3	A	In saline places near the coast; not common (Davidson and Moxley 1923).
Lepidium nitidum Torrey & A. Gray	PEPPERGRASS	P^3	A	Common on grassy slopes (Davidson and Moxley 1923). Very common on grassy plains and hills (Abrams 1904). Ballona Hills, March, 1927 (RSA
Sibara virginica (L.) Rollins [*Arabis v.*]		V^1	A, B	Inglewood in low ground (Abrams 1904)
CACTACEAE				
Opuntia littoralis (Engelm.) Cockerell	PRICKLY-PEAR	D	P	Occasional on prairie (Mattoni 1990).
CALLITRICHACEAE				
Callitriche marginata Torrey	WATER-STARWORT	V^1	A	Soldier's Home, *Hasse* (Abrams 1904). In pools near Santa Monica, *Hasse* (Parish 1917).
CAPPARACEAE				
Isomeris arborea Nutt.	BLADDERPOD	D	S	Occasional on prairie (Mattoni 1990)
CARYOPHYLLACEAE				
Cardionema ramosissimum (J.A. Wienm.) Nelson & J.F. Macbr.		P	P	Santa Monica, fields near city, Crawford & Hiatt, March 30, 1916 (RSA). Near Mesmer, dry sandy cliffs, I. Johnston, June 10, 1917 (RSA). Manhatta Beach, Effie S. Spaulding, May 9, 1924 (RSA).
Loeflingia squarrosa Nutt.		D	A	Near Redondo (McClatchie 1894).
Polycarpon depressum Nutt.	POLYCARP	V^1	A	Redondo Beach, in sandy fields near sea level, Tom Burch, March 9, 1940 (RSA).
Spergularia marina (L.) Griseb.	SAND-SPURREY	D^3	A	(Mattoni 1990). Ballona wetlands, R. Gustafson, March 26, 1981 (RSA). Del Rey, dried mud flats, F.R. Fosberg, June 23, 1930 (RSA).
CHENOPODIACEAE				
Atriplex lentiformis (Torrey) S. Watson [*A. breweri* Wats.]	BIG SALTBUSH	P	P	Del Rey, bluffs at Palisades, Hollenberg, July 24, 1928 (RSA). On bluffs of the seashore. San Juan, *Anderson*, Santa Monica, *Hasse*, *Parish* (McClatchie 1899).
CONVOLVULACEAE				
Calystegia macrostegia (E. Greene) Brummitt [*Convolvulus m.* Greene]	MORNING-GLORY	D	P	(Pierce 1938–1939).
Cressa truxillensis Kunth	ALKALI WEED	V^2	P	Culver City, waste land, F.A. MacFadden, September 10, 1934 (RSA). Common in hard subsaline soils along the coast and on the deserts (Davidson and Moxley 1923). Frequent in saline places throughout our range (Abrams 1904)
CRASSULACEAE				
Crassula connata (Ruiz Lopez & Pavon) A. Berger [*C. erecta* Hook. & Arn., *Tillaea minima* Hook. & Arn.]	PYGMY-WEED	D	A	(Pierce 1938–1939). (Mattoni 1990). Manhattan Beach, Mrs. E.S. Spaulding, May 3, 1924 (RSA).
CUCURBITACEAE				
Cucurbita foetidissima Kunth	CALABAZILLA	D	A	(Pierce 1938–1939). (Mattoni 1990). Frequent on dry sandy soil throughout our range (Abrams 1904).
Marah macrocarpus (E. Greene) E. Greene	WILD CUCUMBER	D	P	(Mattoni 1990).

CUSCUTACEAE				
Cuscuta californica Hook. & Arn.	DODDER	D	A	From meadow onto dune. Parasitic on various plants on the dune, but especially on *Croton* and *Camissonia* (Pierce 1938). (Pierce 1938–1939). Occasional along the coast and in the interior, growing on various low shrubs.
ELATINACEAE				
Elatine brachysperma A. Gray	WATERWORT	V^1	A	Inglewood, L. Abrams, April 1, 1899 (RSA). On the borders of pools near the coast in Los Angeles and San Diego Counties (Davidson and Moxley 1923). Occasional along borders of ponds toward the coast (Abrams 1904).
EUPHORBIACEAE				
Chamaesyce albomarginata (Torrey & A. Gray) Small [*Euphorbia a.* Torrey & A. Gray]	RATTLESNAKE WEED	D	P	Railroad embankment, Inglewood, LeRoy Abrams, May 31, 1902 (RSA)
Croton californicus Muell. Arg.		D	P	(Pierce 1938–1939). Common on dry ground throughout our range (Abrams 1904)
Eremocarpus setiger (Hook.) Benth.	TURKEY MULLEIN	P^{*3}	A	(Pierce 1938–1939). To edge of dune but not on to sandy slopes (Pierce 1938).
FABACEAE				
Astragalus didymocarpus Hook. & Arn.	TWO-SEEDED MILKVETCH	P^*	A	Playa del Rey, A. Davidson, 1920 (RSA).
Astragalus tener A. Gray var. *titi* (Eastw.) Barneby	COASTAL DUNES MILKVETCH	P^*	A	Moist, sandy depressions of bluffs or dunes along and near the Pacific Ocean, 50 feet or lower, rare and seldom collected. Coast of Los Angeles plain (Santa Monica, Hyde Park) — probably extinct (Barneby 1964:1048).
Astragalus trichopodus (Nutt.) A. Gray var. *lonchus* (M.E. Jones) Barneby [*A. leucopsis* (Torrey) Torrey & A. Gray]		D^*	P	(Pierce 1938–1939). (Mattoni 1990). Very common along the coast (Davidson and Moxley 1923)
Lotus purshianus (Benth.) Clements & E.G. Clements [*L. unifoliolatus*, *L. americanus*]		P^*	A	To edge of dune but not on sandy slopes (Pierce 1938).
Lotus salsuginosus E. Greene [*L. maritima* Nutt.]		P^*	A	Widely distributed on coast and interior (Davidson and Moxley 1923).
Lotus scoparius (Nutt.) Ottley	DEERWEED	D^*	P	All over dune and meadow (Pierce 1938). (Pierce 1938–1939). (Mattoni 1990).
Lotus strigosus (Nutt.) E. Greene		D^*	A	(Pierce 1938–1939). (Mattoni 1990). Common on sandy soils in plain and mountains (Davidson and Moxley 1923).
Lupinus bicolor Lindley	MINIATURE LUPINE	D^*	A	(Pierce 1938–1939). (Mattoni 1990)
Lupinus chamissonis Eschsch.		D^*	S	(Pierce 1938–1939). (Mattoni 1990)
Lupinus truncatus Hook. & Arn.		D^*	A	(Pierce 1938–1939). (Mattoni 1990)
Trifolium gracilentum Torrey & A. Gray		P^*	A	Inglewood, L. Abrams, April 1, 1899 (RSA). Grassy hills near Inglewood, L. Abrams, April 10, 1903 (RSA)
FRANKENIACEAE				
Frankenia salina (Molina) I.M. Johnston [*F. grandifolia* Cham. & Schldl.]	ALKALI HEATH	V^2	P	Common in saline marshes (Abrams 1904). Common on alkaline flats near the coast (Davidson and Moxley 1923).
HYDROPHYLLACEAE				
Phacelia distans Benth.		P^*	A	(Pierce 1938–1939). Very common in the plains and foothills (Abrams 1904).
Phacelia ramosissima Lehm.		D	P	Rare on meadow (Mattoni 1990).

Phacelia stellaris Brand [*P. douglasii* Torr. var. *cryptantha* Brand]	BRAND'S PHACELIA	P^*	A	(Pierce 1938–1939). Frequent near the coast along the borders of the sand-dunes (Abrams 1904). On few subalkaline places on the plains, Los Angeles and San Bernardino Counties (Davidson and Moxley 1923).
LAMIACEAE				
Salvia carduacea Benth.	THISTLE SAGE	D	A	El Segundo, established portion of the lee slope, Jack Rempel, May 16, 1932 (RSA). Occasional in sandy soil in all the valleys and in the foothills (Abrams 1904).
Salvia columbariae Benth.	CHIA	P	A	
Stachys ajugoides Benth.	HEDGE NETTLE	V^2	A, P	Playa del Rey (Davidson and Moxley 1923).
LIMNANTHACEAE				
Limnanthus douglasii R.Br.	MEADOWFOAM	V	A	(Pierce 1938–1939). Growing in wet places Reported from Los Angeles and San Bernardino (Abrams 1904).
LOASACEAE				
Mentzelia affinis E. Greene	BLAZING STAR	D	A	Redondo Beach, sandy fields, elevation near sea level, Tom Burch, March 9, 1940 (RSA) El Segundo, sand dunes near strand, Jack Rempel, April 10, 1932 (RSA) Likely more on dunes (Mattoni 1990).
MALVACEAE				
Malvella leprosa (Ortega) Krapov [*Sida hederacea* Torr.]	ALKALI-MALLOW	V^2	P	Common in subsaline places (Abrams 1904) West Los Angeles, O.H. Kappler, June 13, 1944 (notes, LA). On compact ground in subalkaline soils (Davidson and Moxley 1923).
Sidalcea malviflora (DC.) Benth. ssp *malviflora*	CHECKER MALLOW	P^*	P	(Pierce 1938–1939). To edge of dune but not on to sandy slopes (Pierce 1938). Frequent on the grassy hills and mesas (Abrams 1904).
Sidalcea neomexicana A. Gray [*S. parviflora* Greene]		V	P	Between West Adams and Culver City, Hillside, Frances M. Morey, May, 1922 (RSA). In low subsaline places throughout our range (Abrams 1904). In subalkaline meadows from Los Angeles to San Bernardino (Davidson and Moxley 1923).
NYCTAGINACEAE				
Abronia umbellata Lam.	SAND VERBENA	D	A	Very rare on prairie (Mattoni 1990)
ONAGRACEAE				
Camissonia bistorta (Torrey & A. Gray) Raven [*Oenothera b.* Nutt. ex T. & G., *Sphaerostigma b.* Walp.]	CALIFORNIA SUN CUP	P^*	A	(Pierce 1938–1939). (Mattoni 1990) To edge of dune but not on sandy slopes (Pierce 1938) Very common in sand-washes about San Diego, extending north to Santa Barbara (Abrams 1904)
Camissonia cheiranthifolia (Sprengel) Raimann	BEACH EVENING PRIMROSE	D^*	P	(Pierce 1938–1939). (Mattoni 1990)
Camissonia lewisii Raven	LEWIS' EVENING PRIMROSE	D^*	A	(Pierce 1938–1939). (Mattoni 1990) Bordering sand dunes at Ballona Harbor, Abrams, 1901 (RSA); Inglewood, Abrams, 1903 (RSA).
Camissonia micrantha (Sprengel) Raven		D^*	A	(Pierce 1938–1939). Frequent on the sand dunes along the seashore, but not strictly maritime as reported by some, for it is also frequent in sandy soil in all our valleys (Abrams 1904).
Epilobium pygmaeum (Speg.) P. Hoch & Raven [*Boisduvalia glabella* (Nutt.) Walp.]	FIREWEED	V^1	A	Sink near Inglewood, F.W. Pearson, July 19, 1906 (RSA). Low ground. Santa Monica, Mesmer, San Diego (Abrams 1904). Low ground, Santa Monica to San Diego (Davidson and Moxley 1923)
Oenothera elata Kunth ssp *hirsutissima* (S. Watson) W. Dietr	EVENING PRIMROSE	P	B	Ballona wetlands, R. Gustafson, July 15, 1981 (RSA).
PAPAVERACEAE				
Eschscholzia californica Cham.	CALIFORNIA POPPY	D^*	A	Rosenberg (1938).

Platystemon californicus Benth.	CREAM CUPS	P^{*}	A	Common in sandy soil throughout our range below 3,000 feet altitude (Abrams 1904)
PLANTAGINACEAE				
Plantago elongata Pursh [*P. bigelovii* A. Gray]	PLANTAIN	P^{*3}	A	Inglewood (Davidson and Moxley 1923). In moist ground near Inglewood (Abrams 1903).
Plantago erecta E. Morris [*P. hookeriana* Fisher & C. Meyer]	DWARF PLANTAIN	P^{*3}	A	(Pierce 1938–1939). Very common on dry plains and in the foothills throughout our range (Abrams 1904).
POLEMONIACEAE				
Gilia capitata Sims ssp. *abrotanifolia* (E. Greene) V. Grant		P	A	Playa del Rey, A. Davidson, 1930 (RSA). Common and generally distributed on sandy plains (Davidson and Moxley 1923).
Linanthus dianthiflorus (Benth.) E. Greene		P^{*}	A	(Pierce 1938–1939). (Mattoni 1990). Common in sandy soil in the coast and interior valleys (Abrams 1904). Common and general on sandy soils, more abundant towards the coast (Davidson and Moxley 1923).
Navarretia prostrata (A. Gray) E. Greene		V^{1}	A	Sink near Inglewood, F.W. Peirson, July 19, 1906 (RSA). On margin of vernal pool, near junction of Sepulveda Blvd. and W. Railroad, Manhattan Beach vicinity, Frank W. Gould, April 15, 1944 (RSA). In low adobe places on the mesas of the coast valley Inglewood. (Abrams 1904). Not uncommon in desiccated pools in the coastal district of Los Angeles county (Parish 1917). Abundant in restricted localities, near Downey, Bixby; Inglewood (Davidson and Moxley 1923).
POLYGONACEAE				
Eriogonum gracile Benth.		P^{*}	A	(Pierce 1938–1939). Sparse on dune, common at meadow base (Pierce 1938). (Mattoni 1990).
Mucronea californica Benth. [*Chorizanthe c.* (Benth.) A. Gray var. *suksdorfii* J.F. Macbr.]	CALIFORNIA SPINEFLOWER	D^{*}	A	(Pierce 1938–1939). Persists on dunes (Mattoni 1990).
Rumex hymenosepalus Torrey	WILD-RHUBARB	D	P	Del Rey Hills, marshy ground, O.H. Kappler, March 19, 1944 (notes, LA). Frequent in dry sandy soil (Abrams 1904). Common on sandy plains in the counties of San Bernardino, Los Angeles, and Orange (Davidson and Moxley 1923)
PORTULACACEAE				
Calandrinia ciliata (Ruiz Lopez & Pavon) DC. [*C. caulescens* var. *menziesii* Gray; *C. menziesii* Torrey & Gray]	RED MAIDS	P^{*}	A	(Pierce 1938–1939) (Mattoni 1990). Common on grassy mesas especially near the coast (Davidson and Moxley 1923). Common on the mesas, especially in the coast region (Abrams 1904).
Calyptridium monandrum Nutt.	PUSSYPAWS	D	A	(Mattoni 1990). On dunes, likely inland
RANUNCULACEAE				
Ranunculus californicus Benth.	BUTTERCUP	P^{*3}	P	Grassy hills, Inglewood, L. Abrams, March 8, 1903 (RSA). Del Rey Hills, moist hillside, O.H. Kappler, March 19, 1944 (LA).
ROSACEAE				
Horkelia cuneata Lindley		D	P	(Pierce 1938–1939). At the very edge of the dune only, we find a thin line (Pierce 1938).
RUBIACEAE				
Galium angustifolium Nutt.	NARROW-LEAVED BEDSTRAW	D	P	Very rare on prairie (Mattoni 1990)
SCROPHULARIACEAE				
Antirrhinum nuttallianum Benth.	SNAPDRAGON	P	A, B	Venice, Hollenberry, July 10, 1928 (RSA). Ballona Harbor, LeRoy Abrams, June 6, 1901 (RSA). Playa del Rey, LeRoy Abrams, June 8, 1902 (RSA).

Castilleja exserta (A.A. Heller) Chuang & Heckard [*Orthocarpus purpurascens* Benth.]	PURPLE OWL'S CLOVER	P^*	A	To edge of dune but not onto sandy slopes (Pierce 1938).
Linaria canadensis (L.) Dum.-Cours var. *texana* (Scheele) Pennell	BLUE TOADFLAX	D	A	(Pierce 1938–1939). (Mattoni 1990).
Veronica peregrina L.	PURSLANE SPEEDWELL	P^2	A	Occasional along the margins of streams and in the dry beds of winter pools (Abrams 1904).

SOLANACEAE

Datura wrightii Regel [*D. meteloides* A.DC.]	JIMSON WEED	D	P	(Pierce 1938–1939). On meadow and in establishec zones (Pierce 1938).
Petunia parviflora A.L. Juss		V^1	A, P	Occasional on margins of ponds and along streams, especially in subsaline places (Abrams 1904). Extant, Ballona wetlands.

VERBENACEAE

Verbena bracteata Lagasca & J.D. Rodriguez		V	A, B	Inglewood, LeRoy Abrams, June 6, 1901 (RSA). Gardena, "N. Slough," slough edge among grass, prostrate on ground, I. Johnston, April 11, 1917 (RSA).

MONOCOTYLEDONES

CYPERACEAE

Cyperus eragrostis Lam.	NUTSEDGE	V	P	El Segundo dunes, scarce in wet soil. A.C. Sanders September 18, 1987 (RSA).
Eleocharis acicularis (L.) Roemer & Schultes	SPIKERUSH	V^2	P	Inglewood, L. Abrams, April, 1901 (RSA). Frequent in moist places along streams and on borders of ponds (Abrams 1904).
Eleocharis macrostachya Britton	SPIKERUSH	V^2	P	"N. Slough," marshy ground, I. Johnston, April 11, 1917 (RSA). Santa Monica, swamp near road, P.A. Munz, R.D. Harwood, May 15, 1920 (RSA)

IRIDACEAE

Sisyrinchium bellum S. Watson	BLUE-EYED GRASS	P	P	In grassy field dominated by *Phalaris lemmonii*, Sepulveda Boulevard northwest of Los Angeles Airport. Flowers white. F.W. Gould, April 15, 1944 (RSA).

JUNCACEAE

Juncus balticus Willd.	RUSH	V	P	Frequent along streams and in low ground generally throughout range (Abrams 1904). Brackish marsh, Los Angeles Co., H.E. Hasse, May, 1892 (RSA).
Juncus bufonius L.	TOAD RUSH	V^2	A	"N. Slough." Occasional on slough edge. I.M. Johnston, April 17, 1917 (RSA).
Juncus mexicanus Willd.	RUSH	V^2	P	Frequent along streams and in low ground generally throughout range (Abrams 1904). Wilmington, sand dunes. I. Johnston, April 11, 1917 (RSA). Extant, Ballona wetlands.
Juncus phaeocephalus Engelm.	RUSH	V^2	P	Frequent along streams and in low brackish places (Abrams 1904). Baldwin Hills, lowlands, Mr. and Miss Dayton, April 15, 1925 (RSA).

LEMNACEAE

Lemna gibba L.	DUCKWEED	V^2	P	Abundant at Compton, and near San Pedro. "In a ditch at Compton I found it fruiting abundantly on September 2nd" (McClatchie 1896)

LILIACEAE

Bloomeria crocea (Torrey) Cov. [*B. aurea* Kell.]	COMMON GOLDENSTAR	P^*	P	Frequent in the foothills and on the plains (Abrams 1904).
Calochortus catalinae S. Watson	CATALINA MARIPOSA LILY	P	P	

Dichelostemma capitatum (Benth.) A.W. Wood [*Brodiaea pulchella* (Salisb.) E. Greene]	BLUE DICKS	D^{*}	P	(Pierce 1938–1939). (Mattoni 1990)..
POACEAE				
Alopecurus saccatus Vasey [*A. howellii* Vasey, *A. californicus* Vasey]	FOXTAIL	V^{1}	A	Meadows and wet places along the coast to San Diego (Davidson and Moxley 1923). Inglewood (Munz 1935).
Bromus carinatus Hook. & Arn.	CALIFORNIA BROME	D	P	Santa Monica roadside, Crawford & Hiatt, March 28, 1918 (RSA). El Segundo dunes, A.C. Sanders February 18, 1988 (RSA).
Deschampsia danthonioides (Trin.) Munro	ANNUAL HAIRGRASS	V^{1}	A	"N. Slough," damp pasture, I. Johnston, April 11, 1917 (RSA).
Distichlis spicata (L.) E. Greene	SALTGRASS	P^{2}	P	Very common in low subsaline places along the coast and our interior valleys (Abrams 1904). Common in subalkaline places especially near the coast (Davidson and Moxley 1923).
Elymus triticoides Buckley [*Leymus t.* (Buckley) Pilger]		D	P	(Pierce 1938–1939). (Mattoni 1990). Common in low ground, especially in the coast valleys (Abrams 1904)
Festuca megalura Nutt. [*Vulpia microstachys* (Nutt.) Munro var. *hirsuta* (Hack.) Asch. & Graebner]	FESCUE	D^{3}	A	(Pierce 1938–1939). (Mattoni 1990).
Hordeum intercedens Nevski [*H. pusillum* Nutt. in part]	BARLEY	V	A	In subsaline soils near the coast from Los Angeles to San Diego (Davidson and Moxley 1923).
Koeleria macrantha (Ledeb.) J.A. Schultes [*K. cristata* (L.) Pers.]	JUNE GRASS	P^{*}	P	Baldwin Hills, Mr. and Miss Dayton, April 15, 1925 (RSA). Beetle (1947).
Leptochloa uninervia (C. Presl) A. Hitchc. & Chase	MEXICAN SPRANGLETOP	V	A	Ballona wetlands, R. Gustafson, May 15, 1981 (RSA). Also W. Adams Street (RSA).
Stipa cernua Stebb. & Love [*Nassella c.* (Stebb. & Love) Barkworth]	NODDING NEEDLEGRASS	P^{*}	P	Bunch grass (Pierce 1938–1939). (Mattoni 1990).
Orcuttia californica Vasey	CALIFORNIA ORCUTT GRASS	V^{1}	A	In dry ditches assimilating vernal pools, around airport at corner of South Western Avenue and Rosecrans Avenue, A.A. Beetle, June 11, 1946 (LA). Old Municipal Airport, Rosecrans Avenue, Bellue and Henson, October 1944 (RSA)
Phalaris lemmonii Vasey		V^{1}	A	Abundant in meadow near corner of Western Ave. and 131st Street, Frank W. Gould, April 12, 1944 (LA). In exsiccated places; Inglewood, LeRoy Abrams, April 9, 1903 (LA). Meadow lands from South Los Angeles to Inglewood (Davidson and Moxley 1923).

Figure 3 (opposite). Photograph of the "meadow floor" at El Segundo taken by W. D. Pierce in March 1938. Identifiable species include *Lupinus bicolor*, *Camissonia bistorta*, *Phacelia stellaris*, *Lotus strigosus*, *Festuca megalura*, *Cryptantha intermedia*, *Plantago erecta*, and *Stebbinsoseris heterocarpa*.

grasses, in the area of the Los Angeles coastal prairie. Other historical references indicate a greater presence of forbs in coastal grasslands in southern California and into Baja California. For example, on an expedition to Baja California in 1886, C. R. Orcutt described a coastal prairie similar to the Los Angeles coastal prairie:

> The 9th of April we pass through Encenada, and along the shores of All Saints bay, by magnificent fields of the golden California poppy, phacelias, layia elegans, orthocarpus, baerias, larkspurs, platystemon and other delicate annuals and perennials which lent an added charm to the beautiful view of land and sea that was spread out before us on every hand. And thus for mile after mile we alternately contemplate the rich garden of flowers and the beautiful scenery (Orcutt 1886:54).

Although available evidence for the Los Angeles coastal prairie indicates primarily a forb and grassland, the historical descriptions show the presence of patches of native shrubs within the prairie, probably on small sandy rises (Nelson 1919; von Bloeker 1942). Also, like most natural boundaries, the transition from prairie to dune scrub or coastal sage scrub along its edges was likely diffuse, with species extending patchily from one vegetation type into another as topoclimatic and edaphic factors allowed.

The plant species of the Los Angeles coastal prairie do not match any of the vegetation series described by Sawyer and Keeler-Wolf (Sawyer and Keeler-Wolf 1995). The closest approximation would be the California annual grassland series without the introduced species. Were *A Manual of California Vegetation* to include historic vegetation series, the Los Angeles coastal prairie would likely be one of several series added to describe native annual vegetation prior to the introduction of the annual forbs and grasses that have so thoroughly transformed California landscapes.

Evidence for vernal pools

Vernal pools are ephemeral spring wetlands that occupy depressions in grasslands and woodlands (Holland and Keil 1995; Zedler 1987). Only a fraction of the historically extant vernal pools in southern California persist because many have been destroyed by human land

Table 2 Species frequency and percent cover measured across three transects from a photograph of the meadow floor taken by Pierce in March, 1938 (Figure 3).

SPECIES	% COVER	# OF PLANTS
Lupinus bicolor	39	12
Camissonia bistorta	18	17
Phacelia stellaris	14	15
Lotus strigosus	8	15
Festuca megalura	4	6
Cryptantha intermedia	1	3
open	16	na

uses. Recent reviews of vernal pools in southern California (Keeler-Wolf, Elam, and Flint 1995; Zedler 1987) do not indicate the historical or current presence of vernal pools in the Los Angeles coastal prairie. The historical references compiled herein, however, suggest that the area contained extensive vernal pools. Four types of evidence confirm the presence of vernal pools: (1) historical topography, (2) records of plant species restricted to vernal pools, (3) historical descriptions, including photographs and place names, and (4) physical remnants of degraded and recently destroyed pools.

As described earlier, the topography of the Los Angeles coastal prairie was of undulating hills with numerous undrained depressions. Cooper (1967) describes "the presence of degraded but perfectly distinct ridges in the seaward part of the dune sheet, parallel to the coastal ridge and the shore, with elongated undrained depressions or series of depressions in line between them. Parallelism is nearly perfect in the north; south of Manhattan Beach it is less so" (Cooper 1967:97). Cooper presents two hypotheses for the creation of the ridges: that they were formed as offshore bars during a period of higher sea level, or that they were coastal ridges, degraded and flattened over time (Cooper 1967:98). Both of these theories are consistent with descriptions of the creation of vernal pool landscapes (Norwick 1991:11–12).

Zedler (1987), in his community description of southern California vernal pools, lists plants that are indicators of vernal pools. The plants are those "whose distribution in coastal California is completely or substantially restricted to vernal pool basins." Further, "if a number of plants of this group occur together in a particular place, it is virtually certain that the habitat is a vernal pool" (Zedler 1987:41). Our research indicates that 14 of these species were found on the Los Angeles coastal prairie (Table 1). These included *Orcuttia californica*, *Phalaris lemmonii*, and *Elatine brachysperma*. The indicator species certainly were found together in pools. For example, on July 6, 1906, F. W. Peirson collected *Epilobium pygmaeum*, *Psilocarphus brevissimus*, and *Navarretia prostrata* from a "sink near Inglewood" (RSA).

Descriptions associated with plant records in herbaria and texts also indicate the presence of extensive vernal pools in the coastal Los Angeles region. Parish (Parish 1917:52) refers to the "desiccated pools in the coastal district of Los Angeles County." Accounts of *Elatine brachysperma* describe its range as "On the borders of pools near the coast in Los Angeles and San Diego Counties" (Abrams 1904; Davidson and Moxley 1923). LeRoy Abrams describes "exsiccated places" in Inglewood as the locality for a specimen of *Phalaris lemmonii* (April 9, 1903, LA). Frank W. Gould records the location of his collection of *Navarretia prostrata* as "On margin of vernal pool; near junction of Sepulveda Blvd. and W. Railroad, Manhattan Beach vicinity" (April 15, 1944, RSA).

Other historical evidence of the extent of the prairie's vernal pool landscape is provided by anecdotal accounts and photographs. One such account is of "Pollywog Park" in

Table 3. Cover value of species with greatest cover in Coastal Prairie Lupine Vegetation Type (Hektner and Foin 1977).

SPECIES	% COVER
Lupinus arboreus	28.4
Anthoxanthum odoratum	16.9
Holcus lanatus	16.3
Lotus angustissimus	3.0
Juncus effusus	2.2
Rubus ursinus	2.1
open	21.5

Manhattan Beach (Dow 1976:14–15). This public park earned its name from the yearly hatch of western spadefoot toads (*Scaphiopus hammondii*), a species associated with ephemeral wetlands. The drainage has long since been "improved" and the toads are no longer found, but the name remains. An aerial photograph taken in August of 1931 from a view looking inland from the El Segundo dunes shows the many vernal pool basins, as well as fragments of relatively undisturbed prairie (Figure 4).

Mattoni discovered a remnant vernal pool when conducting a plant survey for an industrial development in 1995. A vacant lot in Lomita, although highly disturbed, still harbored a population of fairy shrimp (*Brachinecta* spp.) and western spadefoot toads in 1998, both of which are restricted to vernal pools. In 1997, U.S. Fish and Wildlife Service staff located remnant vernal pools at the Los Angeles International Airport as part of a site visit to discuss environmental documentation for the proposed airport expansion. These pools contain at least two fairy shrimp species (*Streptocephalus wootoni* and *Branchinecta* spp.) (Rogers 1998). The airport site also sustains a western spadefoot toad population that is likely to be destroyed by the expansion.

The species documented from the vernal pools of the Los Angeles coastal prairie most closely match the vegetation series of the San Diego mesa vernal pools as described by Sawyer and Keeler-Wolf (Sawyer and Keeler-Wolf 1995).

Climate and Phenology

The climatic regime is typical Mediterranean coastal southern California with hot dry summers and cool wet winters with limited rainfall. These generalities apply to the coastal prairie, but in addition, coastal fogs are commonplace from late summer through autumn, providing significant moisture. The phenology of the prairie is quantitatively undescribed, but the growth and reproductive periods of most annuals and herbaceous perennials occur during early spring immediately following late winter rains. Exceptions to this pattern include *Eriogonum gracile, Corethrogyne filaginifolia, Gnaphalium microcephalum, Ambrosia acanthicarpa, Heterotheca grandiflora,* and *Eremocarpus setigerus,* all of which commence vegetative growth in late spring and flower during August and September. Additional photographs by Pierce document some of the yearly cycle of the prairie annuals. A verdant display of wildflowers characterized the prairie in the spring, especially in the vernal pools. Figure 5 shows a small vernal depression in the early spring carpeted with *Linanthus dianthiflorus*. Later-growing components of the community are shown in Figure 6, where *Heterotheca grandiflora*, *Corethrogyne filaginifolia*, and *Gnaphalium microcephalum* are visible. None of the pictures left from Pierce's surveys shows that bunch grasses were predominant.

Fauna

The coastal prairie was used by early Los Angeles residents for hunting birds and small game. The diversity of mammals was increased by the vernal pools, as described in an historical account:

> Between the beach and Inglewood, herds of cattle and sheep grazed. In low-lying areas, water congregated and drew birds and small animals which were rich game for hunters coming from inland (City of Manhattan Beach Historical Committee 1977:4).

A list of mammals for the prairie was never published, but Jack von Bloeker's notes, found with Pierce's notes, reveal a high diversity of small mammals (Appendix A). Two subspecies of small rodents, the endangered pacific pocket mouse (*Perognathus longimembrus pacificus*) and the western harvest mouse (*Reithrodontomys megalotis limicola*), were described from locations on the prairie. Recent research on vernal pools indicates that rabbits (*Lepus* spp.) are important dispersal vectors of many vernal pool plants

Figure 4 (opposite). Aerial photograph of site of Los Angeles International Airport showing vernal pool depressions, September 6, 1931 (UCLA Department of Geography Air Photo Archives, Spence Air Photo Collection, Negative #E-3181).

(Zedler and Black 1992). Their presence on the prairie strengthens the assumption that herbarium records of vernal pool plants recorded from one part of the prairie probably were found in other pools across the prairie.

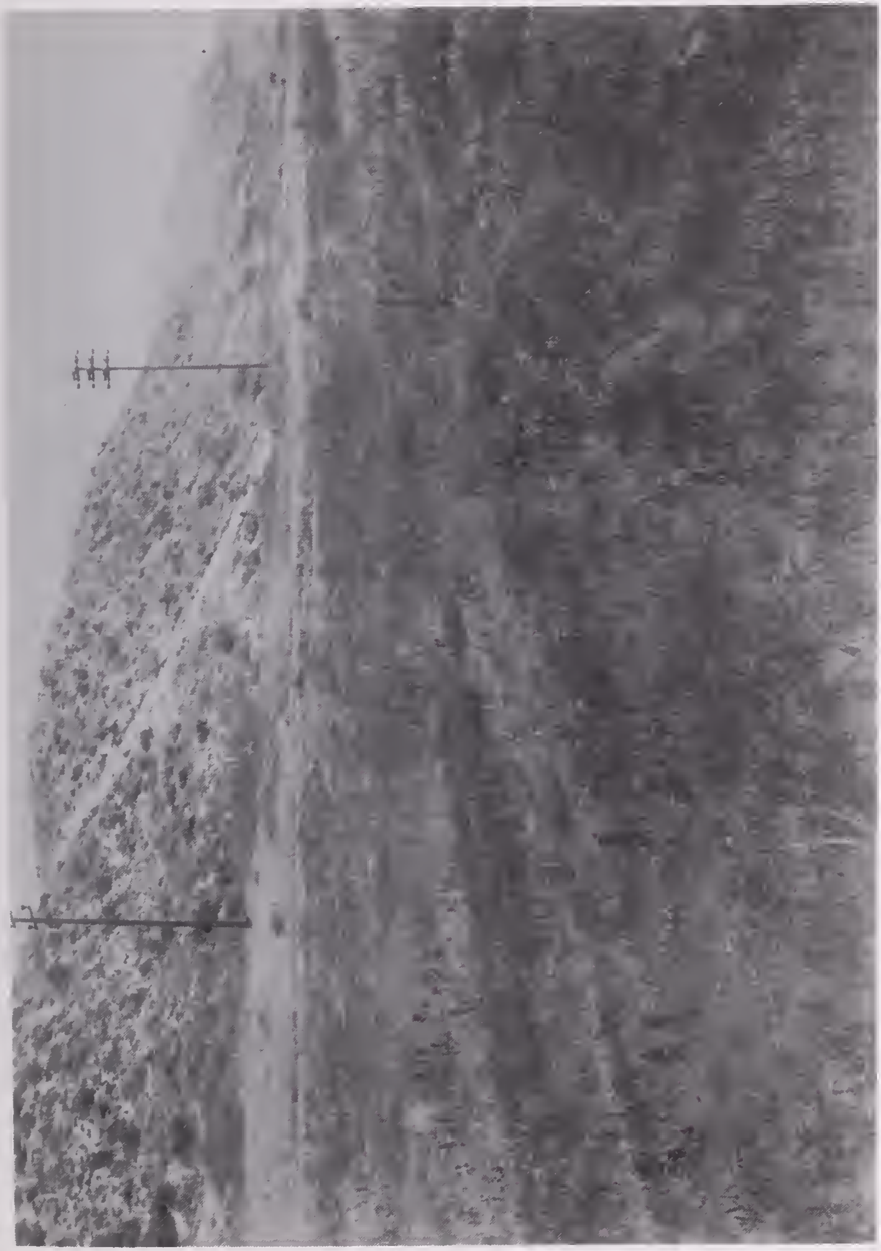
Fossorial mammals played an important role in maintaining the prairie vegetation, especially pocket gophers and ground squirrels. The role of animal disturbance in influencing vegetation type has been largely overlooked and is only now being considered seriously for California grass and forblands (Schiffman 1997). High levels of burrowing mammal disturbance were likely present on the Los Angeles coastal prairie as in other California grasslands (*e.g.*, Hobbs and Mooney 1985; Hobbs and Mooney 1991; Peart 1989; Schiffman 1997). Such disturbance has been shown to increase annual species cover, soil humus content, mineral availability, moisture, and friability (Dalquest and Schaffer 1942; Ellison and Aldous 1952; Hansen and Morris 1968; Martinsen et al. 1990; McGinnes 1960; Mielke 1977; Ross et al. 1968).

In his survey of the reptiles and amphibians of the El Segundo dunes, von Bloeker (1942) recorded five lizard species from the meadow, including the southern California horned lizard, and nine snake species (for full list and scientific names see Appendix B). In addition, the prairie was home to slender salamander, California toad, and Pacific treefrog. Not recorded by von Bloeker, but found in a remnant vernal pool in Lomita, and formerly at "Pollywog Park," was the western spadefoot toad.

Von Bloeker also documented the birds of the Los Angeles coastal prairie (von Bloeker 1943a; von Bloeker 1943b; see Appendix C). The abundant small mammal populations made the prairie a good hunting ground for raptors (sharp-shinned hawk, Cooper's hawk, northern harrier, American kestrel, barn owl, and burrowing owl). The complement of breeding birds shows those typical of open grassland communities (California quail, killdeer, mourning dove, roadrunner, red-shafted flicker, Anna's hummingbird, western kingbird, black phoebe, horned lark, northern mockingbird, loggerhead shrike, western meadowlark, brewer's blackbird, and house finch). Furthermore, the prairie provided wintering grounds for a number of migratory passerines (orange-crowned warbler, yellow-rumped warbler, Townsend's warbler, common yellowthroat, western tanager, savannah sparrow, Lincoln's sparrow, song sparrow, and others). In addition, the seasonal water resource of the vernal pools attracted a few water-associated birds (red-winged blackbird, great blue heron), as well as enhanced the habitat for grassland passerines, as has been shown for other vernal pool systems (Baker et al. 1992).

Figure 5 (overleaf, p. 92). Early spring vernal pool on the Los Angeles coastal prairie showing cover of *Linanthus dianthiflorus* with *Lotus scoparius* and *Lupinus bicolor*. Photograph from W. D. Pierce's notes.

Figure 6 (overleaf, p. 93). Photograph of Los Angeles coastal prairie in July 1939 showing later-growing components of coastal prairie community. Distinguishable species include *Mucronea californica*, *Corethrogyne filaginifolia* var. *virgata*, and *Heterotheca californica*. Photograph from W. D. Pierce's notes.



Restoration Efforts

The most significant remaining remnant of the prairie is 12 ha, located in the lee of the El Segundo dunes at LAX. Mattoni described this fragment previously, and preliminary restoration efforts, sponsored by a grant from the California Department of Transportation, were undertaken by Mattoni during 1988–1994 for the least disturbed areas (Mattoni 1990; Mattoni 1992; Mattoni 1993). Non-native plants were cleared from the site by hand, and *Eriogonum fasciculatum* (planted inappropriately by LAX) was removed by trimming and applying a herbicide. Three prairie floor annuals were successfully reintroduced: *Phacelia distans*, *Castilleja exserta*, and *Plantago erecta*. No restoration attempts were made for a more disturbed area of prairie, formerly used as agricultural land, because it was outside of the area set aside by LAX as a nature reserve. This degraded area might allow for investigation of the importance of mycorrhizal fungi in nutrient mobilization. Such fungal associations with *Stipa* spp. are widespread and correlated with host adaptation to xeric environments (St. John 1993). Active restoration efforts were ended in 1994 when LAX hired a consultant to explore expansion of the airport rather than continue the habitat restoration program.

The historical composition of the coastal prairie is important to future restoration efforts on the LAX fragment and other smaller fragments. Because of misinformation in the literature about the historical extent of the El Segundo dunes (Arnold 1983; Arnold 1990; see Mattoni 1992 for details), restorationists may be misled into attempts to reestablish dune scrub in areas that were formerly coastal prairie. The description of the Los Angeles coastal prairie and its vernal pools given here should inform future restoration efforts in the area and provide a model for documentation of historical conditions. Complete restoration projects must first properly characterize the historic composition of a habitat, or risk inadvertently converting the vegetation into an inappropriate type (*e.g.*, Jordan and Packard 1987). The description of the Los Angeles coastal prairie and its vernal pools should also aid in the potential identification of previously overlooked fragments of these habitats in the urban mosaic.

Acknowledgments

We thank Tim Ross for thoughtful suggestions that substantially improved the manuscript. Andrew Sanders provided the impetus for this paper by creating the initial list of possible prairie plants. We appreciate the advice and encouragement from Dorothy Lyndes, Richard Minnich, Chris Nagano, Barry Prigge, Allan Schoenherr, and Gary Wallace. Catherine Rich and Jerry Longcore improved the paper with thoughtful editorial comments and attention to detail. We thank the two reviewers, who made constructive comments that improved the organization, clarity, and accuracy of the paper. All remaining errors are the sole responsibility of the authors.

The herbaria at the University of California, Los Angeles and the Rancho Santa Ana Botanical Garden graciously provided access to collections and primary documents. The UCLA Department of Geography Air Photo Archives waived fees for research in its extensive collection. The research for this paper was supported by a National Science Foundation Graduate Research Fellowship to Travis Longcore. Support for the restoration project and plant surveys was provided by California Department of Transportation through the City of Los Angeles, Department of Airports.

Figure 7 (opposite). July 1939 photograph of prairie and backdune with large *Lupinus chamissonis* from W. D. Pierce's notes.

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Appendix A. Mammals of the Los Angeles coastal prairie (Mattoni 1990).

Scientific Name	Common Name	Notes
Sorex ornatus californicus	Ornate shrew	B
Scapanus latimanus occultus	Broad-footed mole	B
Macrotus californicus californicus	California leaf-nosed bat	F
Myotis californicus californicus	California bat	F
Eptesicus fuscus bernardinus	Big brown bat	F
Lasiurus borealis teliotis	Red bat	F
Lasiurus cinereus cinereus	Hoary bat	F
Antrozous pallidus pacificus	Pallid bat	F
Tadarida brasiliensis mexicana	Mexican free-tailed bat	F
Eumops perotis californicus	Western mastiff bat	F
Sylvilagus audubonii sanctidiegi	Desert cottontail	B
Lepus californicus bennetti	Black-tailed jackrabbit	B
Spermophilus beecheyi beecheyi	California ground squirrel	B
Thomomys bottae bottae	Botta's pocket gopher	B
Perognathus longimembrus pacificus	Pacific pocket mouse	B; type Palisades del Rey
Dipodomys agilis agilis	Pacific kangaroo rat	B
Reithrodontomys megalotis limicola	Western harvest mouse	B; type Hyperion
Peromyscus maniculatus gambelli	Deer mouse	B
Onychomys torridus ramona	Southern grasshopper mouse	B
Neotoma fuscipes	Dusky-footed woodrat	B
Microtus californicus stephensi	California meadow vole	B
Canis latrans ochropus	Coyote	B?
Urocyon cinereoargenteus californicus	Gray fox	B
Vulpes macrotis macrotis	Kit fox	?
Mustela frenata latirostra	Long-tailed weasel	B
Taxidea taxus jeffersonii	Badger	F?
Spilogale putorius phenax	Western spotted skunk	F
Mephitis mephitis holzneri	Striped skunk	B?
Lynx rufus californicus	Bobcat	F
Ursus arctos californicus	California grizzly bear	F?
Odocoileus hemionus californicus	Mule deer	F

Notes: **B**, breeding and foraging; **F**, foraging only. Partial list from J. von Bloeker's field notes.

Appendix B. Reptiles and Amphibians of the Los Angeles coastal prairie (after von Bloeker 1942).

Scientific Name	Common Name	Notes
Batrachoseps attenuatus attenuatus	Slender salamander	Meadow proper, hides in rodent burrows
Bufo boreas halophilus	California toad	dunes and meadow
Scaphiopus hammondii	Western spadefoot toad	
Hyla regilla	Pacific treefrog	meadow in wet winters
Uta stansburiana hesperis	California brown-shouldered lizard	occasional in meadow
Sceloporus occidentalis biseriatus	Western fence lizard	abundant
Phrynosoma blainvillii blainvillii	Southern California horned lizard	dunes through meadow; most common reptile
Gerrhonotus multicarinatus webbii	San Diegan alligator lizard	grassy areas
Anniella pulchra	Silvery footless lizard	dunes
Eumeces skiltonianus	Western skink	rare in meadow proper
Lichanura roseofusca	California rosy boa	one recorded from meadow
Diadophis amabilis modestus	Southern ring-necked snake	dunes
Coluber constrictor mormon	Western yellow-bellied racer	uncommon, meadow slope
Masticophis flagellum frenatus	Red racer	maybe in brushy meadow
Pituophis catenifer annectens	San Diegan gopher snake	common
Lampropeltis getulus boylii	Boyle king snake	foredune to meadow
Thamnophis sirtalis infernalis	Pacific garter snake	occasional on meadow
Thamnophis hammondii	California garter snake	occasional on meadow in winter and spring
Crotalus viridis oreganus	Pacific rattlesnake	meadow
Clemmys marmorata	Pacific mud turtle	wanders up from Ballona

Appendix C. Birds of the Los Angeles coastal prairie (after von Bloeker 1943).

Scientific name	Common Name	Notes
Ardea herodias hyperonca	Great blue heron	min., non-breeding resident
Cathartes aura septentrionalis	Turkey vulture	min., non-breeding resident
Accipiter striatus	Sharp-shinned hawk	excl., winter
Accipiter cooperii	Cooper's hawk	excl., non-breeding resident
Buteo jamaicensis	Red-tailed hawk	min., resident
Circus cyaneus	Northern harrier	min., non-breeding resident
Falco sparverius sparverius	American kestrel	max., resident
Callipepla californica californica	California quail	max., resident
Charadrius vociferus	Northern killdeer	min., resident
Larus californicus	California gull	min., non-breeding resident
Larus delawarensis	Ring-billed gull	min., non-breeding resident
Zenaida macroura	Mourning dove	max., resident
Geococcyx californianus	Greater roadrunner	max., resident
Tyto alba pratincola	Barn owl	max., resident
Athene cunicularia	Burrowing owl	min., resident
Aeronautes saxatalis saxatalis	White-throated swift	min., winter
Archilochus alexandri	Black-chinned hummingbird	max., transient
Calypte anna	Anna's hummingbird	min., resident
Selasphorus rufus	Rufous hummingbird	min., transient
Selasphorus sasin sasin	Allen's hummingbird	min., transient
Colaptes auratus collaris	Northern flicker	max., resident
Tyrannus verticalis	Western kingbird	max., summer resident-breeds

Sayornis nigricans	Black phoebe	min., resident
Sayornis saya saya	Say's phoebe	max., winter
Eremophila alpestris actia	Horned lark	max., resident
Hirundo rustica	Barn swallow	min., transient
Hirundo pyrrhonota	Cliff swallow	min., summer visitor
Corvus corax sinatus	Common raven	min., non-breeding resident
Corvus brachyrhynchos	American crow	excl., non-breeding resident
Chamaea fasciata	Wrentit	min., resident, possibly breeds
Troglodytes aedon parkmani	House wren	min., non-breeding resident
Thryomanes bewickii	Bewick's wren	min., winter
Cistothorus palustris	Marsh wren	min., winter
Mimus polyglottos	Northern mockingbird	min., resident
Turdus migratorius	American robin	min., winter
Catharus guttatus	Hermit thrush	min., winter
Sialia mexicana	Western bluebird	max., irregular winter
Polioptila caerulea	Blue-gray gnatcatcher	min., winter
Regulus calendula cinerasceus	Ruby-crowned kinglet	min., winter
Anthus rubescens	American pipit	max., winter
Lanius ludovicianus	Loggerhead shrike	max., resident
Vermivora celata sordida	Orange-crowned warbler	min., winter
Dendroica audubonii	Audubon's warbler	min., winter
Dendroica townsendi	Townsend's warbler	min., winter
Geothlypis trichas scirpicola	Common yellowthroat	min., winter
Passer domesticus	House sparrow	max., resident
Sturnella neglecta	Western meadowlark	max., resident
Agelaius phoeniceus	Red-winged blackbird	min., non-breeding resident
Icterus cucullatus nelsoni	Hooded oriole	min., transient
Icterus bullockii	Bullock's oriole	min., spring visitor
Euphagus cyanocephalus	Brewer's blackbird	max., resident
Piranga ludoviciana	Western tanager	min., transient
Pheucticus melanocephalus	Black-headed grosbeak	min., transient
Carpodacus mexicanus frontalis	House finch	min., resident
Carduelis tristis salicamans	American goldfinch	min., non-breeding resident
Carduelis psaltria hesperophilus	Lesser goldfinch	min., winter
Pipilo fuscus crissalis	Brown towhee	min., non-breeding resident
Passerculus sandwichensis alaudinus	Savannah sparrow	max., winter
Zonotrichia leucophrys gambelii	White-crowned sparrow	max., winter
Zonotrichia atricapilla	Golden-crowned sparrow	min., winter
Melospiza lincolnii	Lincoln's sparrow	min., winter
Melospiza melodia cooperi	Song sparrow	min., non-breeding resident

Notes: **Min.**, minimum usage of prairie, **max.**, maximum, **excl.**, prairie and not adjoining dunes or wetlands.

— PROGRESS REPORT —

[Progress reports are generally a minimal stipulation of the monetary grants that are made by the Southern California Botanists, Inc. to students of local botany. Following is a progress report from the recipient of one of SCB's recent grants.]

DARIN L. BANKS
Rancho Santa Ana Botanic Garden
1500 N. College Avenue
Claremont, California 91711

I am very pleased to report that the funds awarded to me for the study of the Agua Tibia Mountains by the Southern California Botanists have been of tremendous help in completing my thesis project.

The funds have helped to support my field collection activities during the 1997 field season. To date, a total of 951 numbers have been collected, representing 17 days of field work. This field season has been extremely gratifying, as a number of range extensions and new populations of sensitive species have been discovered within the Agua Tibia Mountains. I plan to publish these interesting new discoveries in *CROSSOSOMA* as soon as the specimens have been processed.

The funds have also been utilized to provide technical support for the collection databasing efforts of my study. The funds provided for the purchase of software and hardware used to collect and process large databasing projects. To date, the database for the Agua Tibia Mountains includes 3528 specimens. These specimens represent the completed searches of the RSA and SDSU herbaria, as well as approximately 1/3 of the UCR herbarium. Completion of the the UCR and SD herbaria is currently a top priority. All label and accession data have been collected for these specimens, as well as associated species, phenology, and habitat information (if available). I feel this effort will provide a more complete and useful floristic and phytogeographical assessment for the area.

I wish to express my profound gratitude in receiving support for my study from the Southern California Botanists. This year of intense field collecting has helped to fill in a number of "Black Holes" that have plagued my study since its beginning. The study of the Agua Tibia Mountains has been incredibly rewarding to me as a botanist. I feel I have a better understanding of the Southern California flora and the phytogeographical patterns associated with this flora. If not for the continuing support of organizations such as the Southern California Botanists, this important aspect of the development for future botanists would be lost. Your generosity has helped to contribute to the understanding of the Southern California flora, as well as the future of botany in the region. I thank you for giving me the opportunity to participate and contribute to this important cause.

Sincerely,

[signed]

Darin L. Banks

[This page is reserved for a few of the noteworthy collections and informal taxon notes that a couple of individuals were going to send to me. Presumably these notes are now *almost* complete and ready to be submitted. When they are finished, please send them instead to Carl Wishner, *CROSSOSOMA*, 5169 Dumont Place, Woodland Hills, California 91364-2309. I, and I'm sure other SCB members, look forward to seeing your contributions in print. Thanking you most cordially.... — *T.S. Ross, Ed.*]

[This page, and pages 109–180, are reserved for a couple of *excellent* taxonomic over-views (complete with distribution maps!) of genera which are particularly species-rich and taxonomically difficult in Southern and Baja California. Presumably these articles are now *almost* complete and ready to be submitted. When they are finished, please send them to Carl Wishner, *CROSSOSOMA*, 5169 Dumont Place, Woodland Hills, California 91364-2309. I, and all other SCB members, look forward to seeing these outstanding (pun intended?) contributions in print. Thanking you most cordially.... — *T.S. Ross, Ed.*]

[This page, and pages 181–296, are reserved for two regional florulas which make important contributions to our knowledge of Southern California floristics. (I *actually saw* one of these manuscripts in preliminary draft form over a year ago, so I *know* that it exists.) Presumably these florulas are now *almost* complete (—to the degree that floristic studies can be—) and will be submitted within a bushtit's lifetime. When they are finished, please send them to Carl Wishner, *CROSSOSOMA*, 5169 Dumont Place, Woodland Hills, California 91364-2309. We're all eager to see these valuable contributions in print. You know who you are... and I thank you in advance for sharing.... — *T.S. Ross, Ed.*]

REVIEWERS for articles in Volumes 22 & 23 (1996–1997)

On behalf of the Southern California Botanists, I personally thank the following individuals for reviewing papers submitted for the last two volumes of *CROSSOSOMA*. By contributing their valuable time and expertise, they have improved the quality of the articles and notes appearing in the journal. I would like to have included a couple of additional names, but have—for obvious reasons—left out those who never returned reviews, manuscripts, comments, or phone calls. During the last two years, however, several of the individuals cited below were called upon to review more than one manuscript due to their particular areas of expertise, and/or due to their willingness to come to my aid when other reviewers "didn't come through." To this latter group especially, I appreciate their tolerance of the imposition, along with their willingness to contribute valuable time toward the betterment of *CROSSOSOMA*. —*Timothy S. Ross*.

Darin L. Banks
Steve Boyd
J. Travis Columbus
Elizabeth A. Friar
John McNeill
Maile Neel
Barry Prigge
Richard K. Rabeler
Annette H. Ross
Andrew C. Sanders
Victor W. Steinmann
Gary D. Wallace
Scott White
Carl Wishner

CROSSOSOMA DATES OF ISSUE (VOLUMES 18–23):

To date, there have been no taxonomic and/or nomenclatural innovations published within the pages of *CROSSOSOMA* [...*yet!*...], in which case the precise dates of formal publication are of particular importance. However, it is still important to make known the *actual* dates of publication for our journal, especially when it may affect the actual year of publication for an article.

I have listed these dates beginning with Volume 18, because that was the point at which more general time-dated items and announcements were segregated into the new SCB publication *Leaflets*, and the SCB journal, *CROSSOSOMA*, underwent its format change and accelerated evolutionary development. By comparing the journal's cover dates with the actual dates of issue, below, one might note that we've been on a rather rutted, bumpy road in recent times; however, I'm pretty doggone certain that, just around the corner, we're about to get onto some smooth new blacktop. It may still just be a county road, but we're heading for the Interstate! — T.S. Ross, Ed.

VOL./NO.	COVER DATE	DATE OF ISSUE	[Eds.†, RIP]
18 (1)	May 1992	August 1992*	CC
18 (2)	November 1992	December 1992*	CC
19 (1)	May 1993	August 1993*	CC
19 (2)	November 1993	January 1994*	CC
20 (1)	May 1994	June 1994*	CC
20 (2)	November 1994	February 1995*	CC
21 (1)	May 1995	22 May 1996	CC
21 (2)	November 1995	11 July 1997	JMP
22 (1)	Spring-Summer 1996	23 December 1996	TSR
22 (2)	Autumn-Winter 1996	1 October 1998	TSR
23 (1)	Spring-Summer 1997	6 October 1998	TSR
23 (2)	Autumn-Winter 1997	18 November 1998	TSR

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* = Month and year provided December 1996 by Alan Romspert, SCB Treasurer, based on the dates when reimbursement checks were written for the printing costs (originally occurring at the SCB Board meeting during which the copies of the new *Crossosoma* issue were labeled and sorted for mailing).

† = Editors: CC, Curtis Clark; **JMP**, J. Mark Porter, Interim Ed.; **TSR**, Timothy S. Ross.

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